A Continuation of the Oſteographia Elephantina: *Or, a Deſcription of the Bones of an* Elephant, *which died near* Dundee, April *the 27th,* 1706. *By Mr.* Patrick Blair.

BEing come to the Internal Parts of the Head, we ſhall proceed as in Treatiſes of *Oſteology*, by taking Notice of its Structure, two Tables, *Diploe*, Figure and Extent of the inner Table, *Foſſæ*, Eminences and *Foramina*; of all which in their order. As there is no Animal in proportion that is endued with a greater quantity of Brains than Man, ſo there is none that ſeems to have leſs than the *Elephant*. In the one, 'twas ſo order'd by the Wiſe Governor of all Things, that they might be ſufficient for the Generation of ſo many Spirits, as are requiſite for the Performance of the Rational and Animal Functions; and in the other, had the quantity of Brains been greater, the *Principia Nervorum* had been more divided; ſo that inſtead of being requiſite, they had been vaſtly inconvenient, becauſe the Nerves could not ſo well receive the Spirits diſpers'd in a greater Maſs, as now, when contracted within leſſer bounds: And ſuch a contrivance as this being requiſite, the interpoſing of ſuch a vaſt diſtance betwixt the two Tables of the Scull, as we ſhall come to give an Account of, is a ſtupendious Piece of Mechaniſm.

Inner Parts of the Head.

As we before obſerved, in the bottom of the Hole for the Root of the Trunk there are ſeveral *Laminæ (b. b.)* to be ſeen. Theſe *Laminæ*, taking their Origin from hence, run backward in a Parallel, and ſometimes oblique Line, to the ſecond Table of the Scull, or that part of it which inveſts the Brain: And theſe *Laminæ* being either horizontally, perpendicularly, or obliquely plac'd, meet with and interſect each other, forming intermediate Cavities or *Cellules (c. c.)* of different Magnitudes, Poſitions and Figures, according to the Intergerine Walls or Sides, whereof they are compos'd: So that although Dr. *Moulins*, and after him *Tentzelius*, ſeem to aſſert, that they were for the moſt part triangular, yet I have obſerv'd them quadrangular, pentagonal, hexagonal, and rectangular, and even ſometimes irregular. Theſe Cells run, as I ſaid, from the outer Table, or External Parts of the Scull *(a. a.)* to the inner Table or Seat of the Brain *(b. b.)* and communicate with one another by pretty large Holes, either toward

Tab. 3. *Fig.* 1.

Cellules *of the Head.* *Fig.* 4.

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toward the inner or outer Table, and ſometimes two meeting together in the middle frame a third. In a word, as there is no certain Rule obſerv'd in their Figure, ſo neither is there any in their Communication. The diſtance they fill up between the two Tables before is 11 Inches, at the Sides 8 Inches, toward the back-part but 3 Inches, and at the Hole for the Spinal Marrow *(o.)* both Tables meet together; for the Brain is plac'd in the lower and back-part of the Scull (Fig. 5.) All theſe *Cellules* were empty, and only obduc'd with a thin Membrane. And here I cannot but take Notice of what Dr. *Moulins* obſerves, namely, that there are ſeveral Blood Veſſels pleaſantly diſſeminated throughout the Surface of theſe *Cellules* with different Divarications; and *Tentzelius* ſays, he obſerv'd ſeveral Lineaments of Veſſels after the ſame manner. This was not to be obſerv'd in ours at all, nor ſo much as the *Veſtigium* of a Veſſel to be ſeen; the reaſon whereof, I ſuppoſe to be this: When the one was burnt in *Ireland*, and the other over-whelm'd with Earth in *Germany*, both ſuffering violent Deaths, could not but have vaſt Struglings and Wreſtlings, ſuch as Dr. *Moulins* ſays his had, and ſuch as *Tentzelius* ſuppoſes that in *Germany* to have had alſo. By theſe violent Motions, the Blood could not but be propell'd with a vaſt force from the greater Trunks to the ſmaller Capillaries, where it diſtended the Veſſels, and rendred them ſo perceptible to the view after the Death of the Animal; whereas this we treat of, having labour'd of a languiſhing Diſtemper for ſometime, as appears by the *Polypus's* found in the Heart and other Veſſels, the Blood could not but be very languid, and ſcarce convey itſelf to theſe Capillaries; So that the Sides of the Veſſels being collaps'd, they were rendred imperceptible: But that which is more remarkable is, that not ſo much as any of the *Sulci*, which theſe Veſſels might have made in the *Laminæ*, do at all appear; and yet the *Sulci* were ſtill very evident in the Bones found in *Germany*, with the Blood Veſſels containing the dry Blood ſtrictly glued to them, and chang'd into a yellowiſh Colour, and that perhaps after thouſands of Years, as the ſame Author obſerves. Indeed upon viewing more narrowly the *Cellules*, I find all of their *Laminæ* endued with ſmall Holes of an indefinite Number, and irregularly plac'd, through which theſe Veſſels ſeem to have paſt from one *Cellule* to another: So that tho' not ſo obſervable, yet no doubt they have been diſpers'd through them in this as well as in other *Elephants*.

Uſe of the Cellules.

We come next to enquire what may be the Uſe of the *Cellules*. There have been ſeveral Opinions advanc'd about them; as 1ſt. That ſince the *Elephant* has been obſerv'd to ſuck up a great deal of Water by the *Proboſcis*, that the Water perhaps is received into theſe *Cellules*, becauſe of the Communication they ſeem to have with the *Proboſcis*, and that thereby they cool their Brain in hot Countries, where they abound. 2. That ſince the *Elephant* has a very acute Senſation of Smelling, they think the *Nervus Olfactorius* is diſpers'd (after it has paſs'd the *Os Ethmoides*) throughout the fine Membranes that obduce the *Laminæ*, which deſcribe theſe *Cellules*. 3. That theſe *Cellules* being interpos'd betwixt the two Tables of the Scull, they only ſerve to keep the Head from being too weighty. As to the firſt; admit the Water could be receiv'd into theſe *Cellules*, which from their Poſition at the Root of the Trunk, 'tis plain they cannot, there being no muſcular Subſtance to expel theſe Waters, we cannot ſuppoſe this is their Uſe. As to the ſecond; the *Nervus Olfactorius*, after it has paſs'd the *Ethmoides*, does not at all communicate with theſe *Laminæ*, but penetrates the *Os Vomeris*, whence the *cartilaginous Septum* of the *Proboſcis* ariſes: So that theſe *Cellules* can be no ways aſſiſting for that end, the Senſation of Smelling being chiefly perform'd in the *Proboſcis*, and not by the Fibres of the *Nervus Olfactorius* diſpers'd in theſe *Laminæ*, which are quite otherwiſe diſpos'd here, than in Men, Dogs, *&c.* whoſe *Laminæ Spongioſæ* are ſituated in the Root of the Noſe; ſo that the Air muſt touch them before it reach the *Os Cribroſum*; whereas here the *Laminæ* are ſo ſituated, that the Air touches the *Nervus Olfactorius* as ſoon as it can touch them. The third is to me more probable, and Dr. *Moulins* is of the ſame Thought, and that upon ſeveral Accounts; ſuch as the Conſideration of the ſmall extent of the Seat of the Brain, to which had the reſt of the Head been correſpondent, it would have had no proportion to the Body; nor could the Muſcles, fit for moving the Head, have ſufficient ſpace for their Inſertion, nor the *Proboſcis* for its Origin; ſo that there was a a Neceſſity for interpoſing ſome diſtance betwixt the inner and outer Table of the Scull. Now this diſtance muſt be fill'd up with ſome intermediate Subſtance, and had that either been carnous or oſſeous, whether ſpongious or ſolid, or (as ſome think the *Sinus Frontales, Maxillares & Baſilares* in human Sculls are) Mucous; ſhould either of theſe have occupy'd ſuch vaſt bounds, the Head would have been rendered too weighty. Therefore it is wiſely order'd by Providence, that there ſhall be only thin *Laminæ* of Bones, ſo diſpers'd, that the outer Table of the Scull may be more ſtrengthened for ſupporting the Weight of the Muſcle of the Head, Lower Jaw, and *Proboſcis* adhering thereto, that it may have a Communication with the inner Table, and that the ſpace betwixt theſe *Laminæ* may be empty; leſt by any intermediate Subſtance, the Head had been too heavy, as is ſaid, and the inner Table ſo burthen'd as to preſs too much upon the Brain, which might have diſturbed the *Œconomia Animalis*. Analogous to this Structure we find in Oxen, which have the ſame *Cellules* betwixt the two Tables of their Scull, eſpecially toward the Horns, whoſe Flints, as they are call'd with us, or the boney Subſtance, whereby that part of the Horn, which is toward the Head, is fill'd, is likewiſe cellulous, leſt by their Weight, together with that of the Horns, they ſhould prove uneaſy to the Head: But leſt by reaſon of theſe Vacuities, which are all plac'd in the upper and fore-part of the Head of the *Elephant*, (for the Brain and *Elevatores Capitis* are ſufficient to depreſs its back-parts) it ſhould be rendred ſo light, that it could not be equally pois'd or kept ſteady, the Teeth, both in the Upper and Lower Jaw, are rendred thus weighty to counterballance it.

Inner Surface of the Scull.

Tab. 3. Fig. 14.

We come next to conſider the inner Surface of the Scull, where the Brain is lodg'd: 'tis in Figure like an Human one, but more Spherical, being from the Right to the Left 10 Inches, from before to behind 9 Inches, and from above to below at the *anterior Foſſa* 7 Inches, betwixt the middle 5 Inches, and at the *poſterior*, or Seat of the *Cerebellum*, 4 ½ Inches. It has 4 *Foſſæ*, and 5 Eminences. The *anterior Foſſa* (*b. b*) is circumſcrib'd by the fore-part of the inner Table of the Scull before, and by the two *anterior* Eminences (*c. c.*) behind. Here the Brain ſends forth its greateſt Production; for at the hind part this *anterior Foſſa* is depreſs'd ſtreight down near 2 Inches, where the *Os Ethmoides* begins, which is of a ſingular Figure and Structure; for from the fore-part of the Seat of the Brain in the middle, there is here, as in moſt Sculls, an Eminence which runs obliquely downward, till it begins to form the *Criſta Galli* (*d.*) ſo call'd in Human Subjects. This *Criſta Galli* divides the *Os Ethmoides* into its right and left Part; 'tis pretty thick and broad at the Baſe, whence it ariſes from each ſide, till it begins to form a *Crena*, which is perforated by 3 Pair of Holes; and then there ariſes a ſmall *Spina* in the middle *(d.)* at the fore Extremity whereof, it being further extended than the *Ethmoides*, there is another Hole. From this *Criſta Galli* run on each ſide ſeveral prominent convex Lines, ſome obliquely forward, others obliquely backward, others tranſverſely; each of which is branch'd out twice or thrice toward the Circumference, which 'twas impoſſible to expreſs very lively in ſo ſmall a Figure. Theſe Lines have ſome few Perforations running from their higheſt part, but moſt of them are betwixt their Interſtices, where they are pleaſantly diſpers'd after ſome kind of order, which alſo we could not expreſs in the Figure. The *Os Ethmoides* is not unlike a Heart, as they uſually repreſent it, being narrower at the hind part, where the *anterior Foſſa* runs ſtreight down from the fore-part of the *Sella Turcica* (*u*.) and broader at the fore-part of the Bone, which runs obliquely upward from it; 'tis from before to behind 3½ Inches, and from the right to the left 4 Inches: Its Circumference is not altogether circular. The Speciality of this Structure gives ground to enquire into its Reaſon, and the acute Senſation of Smelling, wherewith, according to all Authors, this Animal is endued. In moſt of other Animals, neither is this *anterior* Production of the Brain ſo great, the Perforations of the *Os Cribroſum* ſo many, nor its extent ſo large: But in Animals of an acute Smelling, beſides the Perforations of the *Os Cribroſum*, there are ſeveral ſpongious *Laminæ* which ariſe from its lower part; each whereof are endued with Tunicles, wherein are variouſly diſpers'd ſeveral Branches of the *Nervus Olfactorius*; and theſe *Laminæ* are ſet very near to one another, as it were the Teeth in a Comb, or the *Lamellæ* in the lower Part of ſome Muſhromes. Both the Contrivance of the *Laminæ* and their thick diſpoſal, are very uſeful for Senſation; for whereas, had this *Nervus Olfactorius* been ſtill in one Trunk, the Volatile Saline Particles would have only acted upon ſuch Filaments as compoſe the Surface; whereas the Nerve being variouſly diſpers'd into divers Branches, and theſe Branches differently diſpos'd into ſeveral Surfaces, 'tis capable to receive Impreſſion from as many Saline Particles, as there are different Branches and Surfaces, whereinto theſe are diſpos'd: Add alſo, that the ſharp Edges of theſe *Laminæ* being toward the Air, they are more capable to divide the *Columna Aeris* ſuck'd in by the Noſe, and give a greater tenſion to the Nervous Filaments diſpers'd in them; whereby the Senſation is communicated the more lively to the *Senſorium Commune*;

Os Ethmoides.

arſt

and 'tis obſervable, that ſuch Creatures as have moſt of theſe *Laminæ* have their Smelling the more acute. Now this Structure is only to be ſeen in thoſe Animals, whoſe *Septum intermedium* and two ſides of the Noſe conſiſt of Bones, at leaſt ſo far as their *Laminæ* are extended; but it fares otherwiſe with our *Elephant*, whoſe *Os Ethmoides* is very thin, and has no *Laminæ Spongioſæ* adhering to its outſide, nor a Bone for the *Septum*, or Sides to guard theſe *Laminæ*, which would have been inconvenient, for then the *Proboſcis* could not have mov'd with the ſame Facility, e'en from its Root, as it doth. Therefore to ſupply this defect, and ſtill to continue the Smelling ſo acute, if not more in this than in many other Animals, 'tis provided, that the *anterior Foſſa* ſhould be very deep, that the Production of the Brain in it might be the greater; and leſt its Surface ſhould ſtill be too ſmall, there ſhould be eminent Lines both in the *Vomer* and throughout the reſt of the Bone, that there might ſtill be more ſpace for branching out the Nerve, as it proceeds from its Origin. There may alſo be another Reaſon alledg'd for theſe Protuberances, *viz.* becauſe the Brain is more pendent here than elſewhere, they may ſerve as ſo many Columns to ſupport it, leſt by its Weight it ſhould lean too much upon the *Os Cribroſum*, ſo that the Origin of the *Nervus Olfactorius* being too much preſs'd, inſtead of a clear, might afford a very confus'd Idea of Smelling; and, that even within the Scull it may be ſo divided and diſpers'd in this Animal, as it uſeth to be without it in others: So that the defect of the *Laminæ Spongioſæ* without, is ſupply'd by this diverſity of Perforations and Eminences in the *Os Cribroſum* within. Indeed in Horſes there is ſomewhat of this Structure to be obſerv'd. The *Os Cribroſum* ſeems to be proportionally as large; its Perforations as frequent; and the *Laminæ Spongioſæ* without, both few and thin ſet; by which that Creature has but an ordinary Senſation of Smelling, and only ſuch as is convenient for the choice of its Food; becauſe the *Nervus Olfactorius* has not ſuch a ſpace wherein to be diſpers'd, as the *Septum* and Cartilaginous Sides of the *Proboſcis*; which is ſo great, that ſcarce can a Particle of any odoriferous Subſtance eſcape the touching of ſome one or other of the Nervous Filaments: Whereas in Horſes, there being but a ſhort ſpace betwixt the *Os Cribroſum* and the Noſe, the additional Surfaces of the *Laminæ Spongioſæ*, and the tenſion of the Bone of the Noſe on both ſides, otherwiſe than in the *Elephant*, who has no Bone there at all, are very convenient to ſupply that defect; for you know the more extended a Nerve is, the greater is its Senſation, and a Bone is fitter for tenſion than either a Cartilage or other ſoft Subſtances are.

Anterior *Foſſa of the Scull.*

The *anterior Foſſa* (*b.b.*) is from the Right to the Left 8 Inches, and from before to the *Nervus Opticus* behind 4½ Inches, and of depth, *i.e.* ſtreight down from the *Sella Turcica*, or in the middle betwixt the foreſaid Holes to the bottom of the *Os Ethmoides* on each ſide, 2½ Inches

Middle Foſſæ.

The two middle *Foſſæ* are bounded before by the two *anterior* Eminences (*e. e.*) and behind by the two *Proceſſus Petroſi* (*s. s.*) The Seat of the Brain is here 12 Inches Diameter (*r. r.*)

Firſt Pair of Holes.

In the Center between the two *anterior Proceſſes*, is the firſt Pair of Holes (*f. f.*) at an Inch diſtance. Theſe run obliquely between two ſmall Eminences, where the *Glandula Pituitaria* was lodg'd, call'd the *Sella Turcica* (*u.*) and theſe two *Proceſſes* are call'd in Human Subjects *Clinoides*. This Pair of Nerves runs obliquely downward 6 Inches, and paſſes out below the *Lamina* on each ſide of the Head (*s.*) which frames the upper Edge of the *Sinus* for the Globe of the Eye, being the ſecond Pair, call'd the *Optick Nerves*.

Fig. 2.

Second Pair.

Theſe two *Proceſſes* running ½ Inch back on each ſide, at the ſame diſtance afford two more Holes paſſing in below them, which could not be ſhewn in the Figure; this is call'd the *Foramen lacerum*, and through it paſs the third Pair, or *Oculorum Motorij*; the 4th Pair, or *Pathetici*; the *Opthalmic*, or firſt Branch of the 5th Pair, and all the ſixth Pair (*g.g.*)

Fig. 14.

Third Pair.

The third Pair of Holes is at the back of the two *anterior* Eminences, betwixt the firſt Pair and the External Part of the Seat of the Brain, 4 Inches diſtant from each other (*h. h.*) They are the largeſt of all thoſe in the bottom of the Scull, except that for the Spinal Marrow, and have a peculiar Uſe, which is at large declared, Pages 82 and 83, when ſpeaking of the Veſſels and Nerves of the *Proboſcis*; *viz* that they are for the tranſmiſſion of the *ſuperior* Branch of the ſecond Diviſion of the 5th Pair of Nerves, and a Branch of an Artery which proceeds from the *Arteria duræ Matris* (*k. k.*) being ſeparated from it by the boney *Septum*, which paſſes betwixt it and the Hole for the third Branch of the 5th Pair (*i. i.*) runs along the *Crena* (*x. x.*) and paſſes out with the foreſaid ſecond Branch (*g.g.*)

Fourth Pair.

The fourth Pair of Holes then is for the Egreſs of the third Branch of the 5th Pair (*i. i.*) and Ingreſs of a Branch from the *Arteria duræ Matris*; and the 5th Pair is for the *Arteria duræ Matris* itſelf (*k. k.*)

Fifth Pair.

Sixth Pair.

The ſixth Pair is for the Carotid Artery (*l. l.*) which is otherwiſe ſituated here than in Human Subjects; for in them it

is betwixt the *Proceſſus Petroſus*, and two *poſterior Proceſſus Clinoides*;
whereas here 'tis betwixt the *Proceſſus Petroſus* and Center
of the Baſe of the Scull, on each ſide about 3 Inches diſtant from
SeventhPair. each other. The ſeventh Pair is for the *Nervus Auditorius*
(*m. m.*) being ſituated in the *Proceſſus Petroſus* (*S. S.*) And here 'tis
obſervable, that from the ſide of the Hole where the Carotid
Artery (*l. l.*) paſſes toward the *Os Petroſum*, there is an Hole which
runs about $1\frac{1}{2}$ Inch outward, forms an Angle, and then paſſing
by the Sides of the *Cavitas Tympani* (*e.*) runs ſtreight downward
and penetrates the Scull (*l.*) This I take to be the Hole for the
hard Portion of the *Nervus Auditorius*, which does not here as
in other Animals, paſs in at the Hole of the *Proceſſus Petroſus*
with the ſoft Portion; but as it proceeds from the Brain, goes
along the Sides of the Carotid Artery to this Hole. This hard
Portion, as I told you, was much bigger as we trac'd it running
forward above the Temporal Muſcle, and going to the upper Lip
Eighth Pair. to be afterward diſpers'd in the *Proboſcis*. The eight Pair is for
the Internal Jugular Vein, and *par vagum*, which paſſes out at the
A Hole for ſame Hole (*n. n.*) And the Ninth *Impar*, is for the Spinal Marrow;
the Spinal of which already. And thus we have given an Account of all the
Marrow. Parts of the inner Surface of the Scull. Now we come to the
Conſideration of

The *Ear*, whoſe Parts are, 1ſt. The *Meatus Auditorius*, or
that *Duct* which runs from an Orifice on each ſide of the Head
Tab 3. *Fig.* 2. (*k.*) whereof formerly, to the inner Table of the Scull, terminating
in the *Os Petroſum* (*S.*) being of a Cylindrical Figure (*b. b.*)
Fig. 13. having the *Cellules* ariſing from it on all ſides (*c. c.* &c.) 'Tis in
Fig. 12. length from the External Orifice to the *Crena* for the *Membrana*
Fig. 10. *Tympani* (*b.*) $9\frac{1}{2}$ Inches, and about 1 Inch Diameter throughout
the whole Extent. Its Sides are compos'd of a firm ſolid Bone,
and little thicker than an Halfpenny. Next is obſervable the
Crena for the *Membrana Tympani*, in Circumference 2 Inches $\frac{1}{3}$:
After which is to be ſeen the *Cavitas Tympani*, conſiſting of two
Parts; the firſt whereof (*c. c.*) is $\frac{1}{2}$ Inch deep, ſtreight down
from the foreſaid *Crena*, endued with a great many *Cellules*,
diſtinguiſh'd from each other by ſeveral oſſeous ſolid *Laminæ*,
irregularly diſpos'd, which could not be ſo well repreſented in the
Figure. Theſe Excavations were about two or three Lines, or
$\frac{1}{6}$, or $\frac{1}{4}$ Inch deep. The next Cavity (*d.*) is of a Surface more
ſmooth, ariſes much higher than the former, and runs toward
the outer Table, having ſeveral Semicircular Lines running
acroſs.

acroſs. The firſt Cavity is from the Right to the Left $1\frac{1}{3}$ Inch, and from before to behind $1\frac{1}{4}$ Inch. The ſecond Cavity 1 Inch in length, and $\frac{1}{2}$ Inch at its broadeſt part. The *Oſſicles*, *viz.* the *Malleolus* (*a*) *Incus* (*b*) *Stapes* (*f*) are of a proportional big- Fig. 13. neſs, as you ſee in the Figure, where they are ſhewn in their true Dimenſions, running from the *Malleolus*, which touches the *Membrana Tympani*, to the *Baſis* of the *Stapes*, which ſhuts the *Foramen Ovale* (*c*.) It has but a ſmall *Cochlea* in proportion (*d*.) Fig. 11. whereinto a Branch of the Soft Portion enters, and another Branch of the ſaid Portion goes into the *Cavitas Tympani*, whoſe upper part is covered by the lower ſide of the *Os Petroſum* (*b b*.) I was at ſome Pains to file down a great part of the *Os Petroſum*, where I obſerv'd how the Hard Portion paſt outward from the Hole for the Carotid Artery, as is ſaid, and how the Soft Portion after it had entred the *Proceſſus Petroſus* (*e*.) did divide it'ſelf into theſe two juſt now mention'd Portions, to the *Cochlea*, and *Cavitas Tympani*. I ſearch'd for the *Labyrinth*, or *Lineæ Semilunares*, but could find none; by which I concluded, that theſe Caverns in the bottom of the *Cavitas Tympani* did ſerve for the ſame Uſes in this Animal, as the *Meanders* of the *Labyrinth* do in others; and that this ſecond Cavity did ſerve for receiving and continuing the Undulations of the Air, for the longer retaining of the Sound, as we ſee the cavous *Apophyſis Maſtoides* does in Sheep, Cats, Dogs, *&c.* and the Spongious one in Men. The *Foramen Ovale* is but little, and the Baſe of the *Stapes* very thin and ſlender (*h*.) whereby I ſuppoſe the Senſation of Hearing is rather perform'd by the Vibrations of the Air upon the *Cavitas Tympani*, than by any aſſiſtance it had from the *Cochlea*. The upper part of the *Septa* which circumſcrib'd the Caverns in the *Cavitas Tympani*, is thicker, and the lower part very ſlender; and I doubt not but they communicate with one another by ſeveral *hiatus*, whereby what humidity is in the bottom of the Caverns may be convey'd from each other, till it come to the Orifice of the *Aqueduct* parallel to it, and thereby diſcharge it into the Mouth; for the boney part of this *Aqueduct* deſcends in a ſtreight Line, from the fore part of the bottom of this *Cavitas Tympani* $5\frac{1}{2}$ Inches flat, being from the Right to the Left about $\frac{1}{4}$ Inch, and from before to behind 3 Lines, or $\frac{1}{4}$ of an Inch. I am ſorry I did not know the *Os Petroſum* would ſo eaſily ſeparate for I might have obſerv'd more narrowly the Structure of the Ear before the Scull was boil'd; and 'tis by an accidental Separation of this

Bone, after the Head was taken out of the Caldron, that I have now come to give this Account of it.

From the Head we go to the Trunk, which conſiſts of the Spine, Ribs, and *Sternum*. The *Spine* is divided into the *Vertebræ* of the Neck, Back, Loins, *Os Sacrum*, and *Tail*. The *Vertebræ* of the Neck differing from each other in ſeveral things material, I ſhall ſpeak of them ſeparately: Whereof

The firſt Vertebra *of the Neck.* *Tab.* 4. *Fig.* 1.

A.

A. 1.

The firſt call'd *Atlas*, has four conſiderable Cavities; two at the fore part (*b. b.*) whereby it receives the *Condyles* of the Scull, and two at the back-part (*c. c.*) whereby it receives the Baſe of the following *Vertebra*; the firſt two are 2 ½ Inches from above to below, and 2 Inches from the Right to the Left. It has a large Hole in the middle, divided into its larger part (*a.*) 3 Inches Diameter, which is for receiving the Spinal Marrow, and Leſſer, which receives the Tooth of the following (*b.*) Four Perforations, or two Pair of Holes at the Sides; one at its lower and fore-part (*c. c.*) which receives the *Arteria Cervicalis*, or *Vertebralis* from the ſide of the Spinal Marrow, and conveys it to a *Crena* (*e. e.*) along which it runs, till it again penetrates the ſame Bone (*d. d.*) and goes out at the back part; after which in its Progreſs it perforates all the tranſverſe Proceſſes of the reſt of the *Vertebræ* of the Neck, as is uſual in other Animals. This *Crena* is guarded on its outſide, or at the Extremity of the tranſverſe Proceſſes by a Protuberance, which runs toward the Scull 1 ½ Inch (*a. a.*) till it be equal to the Sides of the Hole for the Spinal Marrow. At its upper and fore-part it inclines obliquely (*f.*) where 'tis 3 Inches thick, and at its lower and back-part (*e.*) it has a Protuberance which is extended where it embraces the Tooth. This *Vertebra* is in Diameter 12 Inches (*a. a.*) The tranſverſe Proceſſes are in breadth from above to below 2 Inches, and in length at their lower part 3 Inches.

The ſecond. A. 2.

The ſecond *Vertebra* has remarkable in it, 1ſt A large Protuberance called the Tooth (*d.*) which is received by an Hole in the former, and ſerves as an Axis upon which the Head is turn'd round. This Tooth runs forward from the Body of the *Vertebra* 2 Inches above, and 2 ½ Inches below, tapering and terminating in an obtuſe Point. 2. A large Protuberance ariſing from its upper and middle part (*a. a.*) (like the *Proceſſus Spinoſus* in others, 4 Inches from the beginning of the tranſverſe Proceſſes, two Inches broad at the top, terminating in two obtuſe Points, with a *Sinus* (*b.*) larger at the back than the fore-part) in the middle.

This Protuberance inclines forward toward the firſt *Vertebra*. 3. Its Body or back part, and Baſe of the Tooth (*f.*) tranſverſely 4 ½ Inches, perpendicularly 4 Inches. 4. Two oblique Proceſſes, by which 'tis articulated with thoſe of the following, and betwixt which there are 4 Inches (*h. h.*) 5. Two tranſverſe Proceſſes (*g. g.*) each 2 Inches long. At its fore part on each ſide of the Tooth (*d.*) are two Protuberances (*e. e*) which are received by the two hind Cavities of the firſt *Vertebra*. This *Vertebra* is two Inches thick from before to behind, the Hole for the Spinal Marrow 2 Inches Diameter, thoſe for the Cervical Artery (*f. f.*) ½ Inch Diameter. Between the oblique and extremity of the tranſverſe Proceſſes, 'tis 6 Inches. B. 2. A. 2.

The third and fourth Vertebræ. A. 3. A. 4.

The third and fourth *Vertebræ* differ from this, 1ſt. In their four oblique Proceſſes (*e. e.*) *viz.* two by which they are articulated with the preceding, and two with the following, which is common to thoſe of the Neck, Back and Loins. 2. In their Convex Body before (*b. b.*) and concave behind (*c. c.*) where they are receiv'd by, and do receive the preceding and following, which is alſo common to the other *Vertebræ*. 3. In their Eminences at the Top (betwixt the oblique Proceſſes) at 4 ½ Inches diſtance (*e. e.*) betwixt which there is a Depreſſion in the third, and a ſmall Protuberance in the midſt of this Depreſſion in the fourth. Their tranſverſe Proceſſes (*f. f.*) are 2 Inches broad at the Extremity, from which they deſcend obliquely 3 Inches, having a Protuberance on each ſide, betwixt which and the Body of the preceding *Vertebra* (*h. h.*) does proceed a Branch of the Cervical Artery, which it continues to do from betwixt all the other *Vertebræ* of the Neck, till it comes to betwixt the Seventh of the Neck and firſt of the Back, where 'tis wholly ſpent. Betwixt the oblique Proceſſes (*e. e.*) and tranſverſe (*f. f.*) it is 4 Inches. The Hole for the Cervical Artery (*d. d.*) is here Oval. The Bodies of theſe *Vertebræ* are thinner below than the former: They are 4 Inches in Diameter, being of the ſame Dimenſions with all the other *Vertebræ* of the *Spine*, till you come to the *Os Sacrum*. Thoſe in the Neck are more flat before, and thoſe in the Back more Protuberant. Beſides thoſe *Sinus's* in the inſide of the fore-mention'd Protuberances in the Neck, there is likewiſe a *Sinus* betwixt the tranſverſe Proceſſes of each *Vertebra* and its Body, throughout the whole *Spine*, for tranſmiſſion of the ſeveral Conjugations of Nerves from the Spinal Marrow. *Fig.* 3.

The fifth. A. 5. The fifth *Vertebra* is of the ſame Dimenſions with the other two, and differs in nothing from them but by its Spinal Proceſs, which from ½ Inch in the former ariſes to 1 ½ in this, being ½ Inch broad, and thin at the Extremity.

The ſixth. A. 6. The ſixth *Vertebra* differs from all the reſt in its tranſverſe Proceſs, which is as far forward as the reſt, and ſends out another Proceſs which runs as backward; ſo that from the Extremity at the fore-part to that at the back-part, 'tis 3 Inches. It *Fig.* 3. alſo ſends another Protuberance obliquely outward 1 ½ Inch (*i i.*) At this Proceſs the Cervical Artery paſſes out from the tranſverſe Proceſs of the *Vertebra*, and only ſend a Twig to the

The ſeventh. Seventh *Vertebra*, or laſt of the Neck, which differs from all the reſt, 1ſt. In the length of its Spinal Proceſs, which is augmented from 3 Inches in the former to 5 in this (*g.g*) 2. In the ſmallneſs of the Hole for the Cervical Artery (*d. d.*) this being the laſt perforated tranſverſe Proceſs, as is ſaid. 3. In a *Sinus* on each ſide of its Body behind (*i. i.*) whereinto it receives part of the firſt Rib.

The Thorax. The *Thorax* is divided into the *Vertebræ*, Ribs, and *Sternum*: There are 19 *Vertebræ*, correſpondent to ſo many Pair of Ribs; they differ nothing from the former, except that their Body is more Protuberant, that their Spinal Proceſſes are augmented and dimiſhed in their length, according to their Situation, and that they have a *Sinus* in each ſide, both before and behind, for Reception of their reſpective Ribs: For the Weight and Dimenſions of their Spinal Proceſſes ſee the following Table.

Ribs. The Ribs are divided into the true (which are articulated with the *Sternum*) and falſe ones, with and without Cartilages. There are 8 Pair of true Ribs, 8 Pair falſe with, and 3 without Cartilages. The Cartilages here are ſoft, as in Human Subjects, and not boney, as in Oxen, Harts, *&c.* The length of the Ribs both from the one Extremity to the other, and along their inner Surface, that you may the better know how much they are bended, with their breadth at the Extremity and Weight of each Pair, ſhall be given in the following Table.

Sternum. The *Sternum* conſiſts of four Bones; they are plac'd edgewiſe, being two Inches thick above, and ſharp below: From the fore-part to the Point of the *Cartilago Enſiformis* 'tis 25 Inches; whereof the firſt is 88 Inches long, and 4 ½ Inches broad at the Articulation of the firſt Rib; the ſecond 4 ½ Inches long, and 3 Inches broad; the third 3 ½ Inches long, and 3 Inches broad; the 4th

4 Inches long, and 2 ½ Inches broad; the reſt of the length is made out by the *Cartilago Enſiformis.*

The Vertebræ *of the Loins.*

The *Loins* conſiſt of three *Vertebræ*, whoſe Spinal Proceſſes are but ſhort; their tranſverſe Proceſſes a little longer than thoſe in the Back; which beſide their Weight, (for which ſee the Table) is all that is material about them.

Os Sacrum. *Tab.* 4. *Fig.* 4.

The *Os Sacrum* conſiſts of five Bones; they are of a flat Surface before (B) each having three Proceſſes (*viz.* two oblique, and one Spinal, under which the Spinal Marrow deſcends) behind. They are perforated before by 4 Pair of Holes, plac'd at their Interſtices on each ſide. It is 12 Inches long and 7 ½ broad, where 'tis articulated with the *Oſſa innominata* above, and 6 Inches broad at the lower part. See Fig. 4 and 5.

The Vertebræ *of the Tail.*

The *Tail* conſiſts of twenty nine *Vertebræ*, whoſe differences are to be ſeen in the following Tables. From the *Os Sacrum* to the Eight they have five Proceſſes, *viz.* two tranſverſe, two oblique, and one Spinal, under which the Spinal Marrow deſcends, ſending forth a Conjugation of Nerves from betwixt each of them. From the Eighth to the Sixteenth each has 4 Proceſſes, *viz.* two longitudinal behind, betwixt which the remainder of the Spinal Marrow ſtill deſcends, and two tranſverſe: The reſt have no Proceſs at all, but are of a kind of quadrangular Figure, having a Ridge which deſcends before and behind, and on each ſide; being ſomewhat bigger at each end, and ſmaller at the middle. All the *Vertebræ*, as well in the Neck and Back, as Tail, had Cartilages, which run betwixt each of them; they were about ½ Inch thick in the Back, thinner in the Neck, and thicker proportionably in the Tail. Theſe Cartilages I was obliged to ſupply with Leather in mounting the Sceleton, as ſhall be ſhewn. So much for the Trunk.

The Fore Extremities.
Scapula.

Becauſe this is a Quadruped, we ſhall divide the Extremities into the fore and hind ones. We begin the fore Extremities at the *Scapula*, which is uſually divided into its Head, Neck, *Spine*, Proceſſes, fore and hind Cavities, (*i. e.* theſe Parts before and behind the *Spine*) its concave part, which lies upon the Ribs, and its convex or outer part, and its Margin. The Head (*a.*) which receives the *Os humeri*, is oblong, (becauſe the motion of the *Humerus* perform'd by this Animal, is rather Flexion and Extenſion, than Adduction or Abduction) wherefore the Cavity being 5 ½ Inches long, is only 3 ½ Inches broad, and the Margin of the Bone ariſing from the fore and back-part (*b. b.*) makes it

2 Inches deep; for at the ſides the Margin is equal to the Cavity. At the back-part there are two Proceſſes; that which regards its convex part is 2 Inches long, rugous, thick and obtuſe; that which regards the concave, runs two Inches backward, where it forms an obtuſe Angle, whence it aſcends 3 Inches to the Neck: This has a ſharper Edge than the former, being ſomewhat incurvated. Betwixt theſe two Proceſſes is a rugous *Sinus* two Inches broad, aſcending from the Cavity of the Head 3 Inches to the Neck, and riſing ſomewhat in the middle of its Progreſs. The Neck *(c. c.)* is flat, being more obtuſe at its back-part, and where is the laſt nam'd Protuberance, and ſharper at its fore, where is a little Protuberance toward the *Spina* on the convex ſide, being more plain on the concave. Betwixt the firſt of the fore-nam'd Protuberances (*b.*) and the *Spina*, there is a *Sinus* which aſcends 4 Inches (*d.*) and from the ſame Protuberance (*b.*) to the Extremity of the *Proceſſus Coracoides* (*e.*) is 3 ½ Inches. This *Proceſſus Coracoides* is that part of the *Spina (e.)* which runs toward the Neck of the *Scapula*, but does not, as in Men, defend the *Humerus* from Diſlocation. 'Tis very rugous and convex before, but concave at its back part, being 3 ½ Inches broad at the Point it aſcends 11 Inches, where 'tis raiſed 5 Inches from the Body of the *Scapula* (*f.*) it inclines a little backwards and aſcends 12 Inches more, till it be loſt where the *Epiphyſis* begins *(g.)* being ſtill concave at the fore, and convex at the back-part. From the *Spina* (*f.*) it ſends forward a Production 8 Inches long *(h.)* 3 Inches broad at its upper part, two Inches about the middle where 'tis crooked, and 1 ½ Inch at its lower Extremity where 'tis thin and ſharp; but at its upper part thicker and rugous, concave at the inner, and convex at the outer ſide. This Proceſs ſerves to keep the *Muſculi ſupra-ſpinati* within their bounds, when they pull up ſuch a vaſt Weight as the fore Leg. As the *Spina* runs up 5 Inches from this Production, 'tis rugous and thick in its edge, from thence it becomes gradually thinner till it comes to the *Epiphyſis*. The Back and upper part of the *Scapula* is very thin, and ſharp from the Neck (*c.*) 16 Inches upward to *(m.)* from thence it aſcends 5 Inches to the place where the *Spina* ends, and forms a very rugous and ſpongious *Epiphyſis*, thick at the upper end *(l.)* thence it deſcends obliquely two Foot *(i)* whence its fore edge runs obliquely in toward the Neck 10 Inches, being ſharp; thence it tends outwards and deſcends other 5 Inches till it comes to the Neck. All the upper part of the

Scapula from (*m*) to (*l*) where 'tis thickeſt, and from (*l.*) to (*i.*) where 'tis thinner, except towards its lower part, is covered with an *Epiphyſis* (as is ſaid) ſpongious and rugous, which ſeperated by the boiling, and is a further Argument that this Animal was Young, according to their term of Liſe; 'tis otherwiſe a very thin Bone and ſolid, except where the *Epiphiſes* are.

The Humerus.

The *Humerus* is a very irregular Bone; it's Head is in Circumference 2 Foot, having 2 remarkable *Epiphiſes*, one whereby 'tis articulated with the *Scapula* from before to behind with a convex Surface 8 Inches, and from the right to the left 4 ½ Inches, and another on the outſide riſing higher and ſharp about 1 ½ Inches. Round this *Epiphyſis* is 11 Inches, and from before to behind with a flat outſide 6 ½ Inches. Betwixt the *Epiphyſis*, which receives the *Scapula*, and this Protuberance is a *Sinu* about 3¼ Inches broad, and about 1 ½ Inches deep; as it deſcend toward the inſide it becomes deeper, and only 2 Inches broad: 'Tis for lodging the external Tendon of the *Biceps*, analogous to a *Crena* for the ſame purpoſe in human Subjects. The Neck of the *Humerus* is in Circumference 19 Inches, flat behind for the ſpace of 4 Inches, then forming an Angle, and running obliquely outward 3 Inches, then paſſing foreward below the utmoſt Protuberance 5 Inches, thence croſſing the forenam'd *Sinus* it runs back, firſt flat, then a little convex, 7 Inches. Below this outward Protuberance there is a rugoſity for the Inſertion of the *Flexores Cubiti* 6 ½ Inches long, and 3 ½ Inches broad at the upper part, and thence deſcending gradually it terminats in a Point. At the lower part of this rugoſity the Bone is 13 ½ Inches in Circumference, having 3 Faces; one at its Back part 5 Inches broad, ſomewhat depreſs'd from the inſide, then a little Proteberant, as it tends outward; a ſecond on the outſide, and 4 Inches broad; and the third on the inſide, 4 ½ Inches broad, flat alſo. Here begins another conſiderable rugoſity, ſmall and oblique from the back part of the utmoſt Protuberance of the *Humerus*, and becoming very rugous at this Place, continuing 6 Inches obliquely downward, and 2 Inches broad about the middle. At the lower part of this rugoſity the Bone is 18 Inches in Circumference, with its three Faces otherwiſe diſpoſed; that which was before terminated in an obtuſe *Spina*, and where it was an obtuſe *Spina* behind, now becoming flat. On the outſide begins a conſiderable *Sinus*, being the Continuation of the *Sinus* formerly mention'd betwixt the *Epiphyſis Humeri* and outer

Protuberance, whence in its deſcent the Bone became depreſs'd; and now the *Sinus* is conſpicuous (3) being fram'd by an obtuſe *Spina*, deſcending obliquely forward from the foreſaid rugoſity on the one ſide, and another obtuſe *Spina* deſcending obliquely outward on the other. This *Sinus* (2) is [illegible] Inches broad from before to behind; thence meaſuring backward the Bone is flat $3\frac{1}{2}$ Inches; meaſuring from thence on the inſide, the Bone having form'd an obtuſe Angle, is $5\frac{1}{2}$ Inches flat alſo. The *Spina* on the fore ſide, after it has deſcended $5\frac{1}{2}$ Inches, the Bone becomes flat; that on the outſide terminating in a conſiderable Protuberance, $4\frac{1}{2}$ Inches long, where the Bone has only two Faces, convex before and concave behind, and 17 Inches round. Behind its foreſaid outward Protuberance is 7 Inches; it becomes $1\frac{1}{2}$ Inches depreſs'd in the middle, where the *Sinus* for receiving the *Cubitus* begins. From the foreſaid external Protuberance it deſcends in a ſtreight Line 8 Inches, and from its oppoſite part at the inſide it deſcends obliquely backwards 5 Inches, and here the lower *Epiphyſis* begins, where 'tis receiv'd by the *Cubitus* and *Radius*. This *Epiphyſis* is 1 Foot $10\frac{1}{2}$ Inches round being [illegible] Inches thick at the outſide and flat, and 7 Inches at the inſide and Protuberant; betwixt which behind is a conſiderable *Sinus* $5\frac{1}{2}$ Inches broad, and $2\frac{1}{2}$ Inches deep, and before, another *Sinus* 7 Inches broad, of the ſame deepneſs. This *Epiphyſis* is at its lower extremity and inſide, where it receives the *Cubitus*, $5\frac{1}{2}$ Inches from before to behind; of a convex Surface and 6 Inches at its outſide, where 'tis receiv'd by the *Radius*. At its fore part the *Sinus* is not very conſiderable, but at its back part deeper and narrower for receiving the *Olecranon*. At the extremity of the *Epiphyſis*, 'tis narrower, being only 6 Inches from the right to the left before, and $7\frac{1}{2}$ Inches behind. And thus you have an Account of the moſt irregular Bone of the Body, being at it's external part 30 Inches in length, and 26 at its internal; having a large Head conſiſting of an *Epiphyſis* receiv'd by the *Scapula*, a large Protuberance on the outſide defending it from Diſlocation, and a *Sinus* betwixt the two reaching a good way back, thence deſcending to its Neck, whence the Bone becomes flat (2) to about the middle, deſcending on the outſide, flat alſo, with two rugoſities for the Inſertion of the Tendons. Betwixt this outſide and back part, is a very large *Sinus* for the *Biceps*, which oblique ſituation (3) is an admirable contrivance for adding Strength and conciliating length to this Muſcle. Now the ſhape of the Bone begins to be chang'd, for whereas it formerly reach'd from before to behind, now it reaches from the right to the left, and its lower extremity (4) becomes broader, whereas at its upper extremity it was rounder.

The Cubitus *and* Radius.

The Olecranon.

The *Cubitus* and *Radius* are two Bones of a ſingular Figure, the one lying above the other: We ſhall begin with the *Cubitus*, which is in length from the top of the *Olecranon* to its Articulation with the Bones of the *Carpus* (5) 28 Inches. The *Olecranon* (1) from the right to the left, with a Surface ſomewhat convex, is 9 ½ Inches; and from before, where it is articulated with the *Humerus*, to its utmoſt point behind, in a ſtreight line 7 Inches. This *Olecranon* as it deſcends, becomes narrower by degrees, till it forms a *Spine*, which runs obliquely forward 13 Inches, where 'tis contracted from the foreſaid 9 ½ Inches to 3 in breadth. Afterwards the Bone is enlarg'd on each ſide, till it forms a convex Surface, which is received by, and articulated with the *Humerus*. This Articulation is a *Ginglymus*, as in all other Animals; *viz.* the *Cubitus* and *Radius* together receive the *Humerus* on the outſide before, which on the inſide the *Cubitus* doth alone. Betwixt theſe two is a large Protuberance riſing 2 ½ Inches, which is alſo received by the *Humerus*. Meaſuring from the extremity of the *Cubitus* and *Radius*, which receive the *Humerus*, on the outſide to its oppoſite part on the inſide, including the back part of the *Olecranon*, it is 10 Inches. Both the Bones from the right to the left, at the articulation before, are 7 Inches. Then meaſuring round the *Cubitus*, below the Articulation, is 16 ½ Inches. Here the Bone is flat before, from the right to the left 7 Inches; from thence obliquely backward to the forementioned *Spine* beneath the *Olecranon* is 5 Inches on the outſide, and 6 ½ on the inſide. At the lower part of the foreſaid *Spine* the *Cubitus* is in Circumference 11 Inches; *viz.* flat before 4 Inches, where it forms an Angle; thence running obliquely backward 2 Inches, forming another Angle; thence 1 ½ Inch obliquely backward, where 'tis a little Protuberant; and from thence obliquely inward 3 ½ Inches Round the lower extremity of the *Cubitus*, and 3 Inches above the *Epiphyſis*, it is 12 Inches; *viz.* from the *Radius* 2 ½ Inches; thence obliquely outward, with another flat Surface, 3 ½ Inches; and from thence, with a convex Surface, round the back part 6 Inches. The *Cubitus* at the *Epiphyſis*, from the *Radius* on the fore part to its oppoſite ſide on the back part, is 13 Inches; from the upper part of the lower *Epihyſis*, where 'tis articulated with the external Bone of the *Carpus*, obliquely inward is 5 Inches. This ſame *Epiphyſis*, with a convex Surface behind, from the right to the left is 5 Inches.

Radius.

The *Radius* in length, from the external and upper part of the *Cubitus*, on which it lies, and with which it is united, running obliquely inward, is 1 Foot 9 ½ Inches. At its upper part it ſends a Production outward 3 ½ Inches, by which, with a part of the *Cubitus*, it receives the external part of the lower *Epiphyſis* of the *Humerus*: From thence the Bone is contracted at its fore part to 2 ½ Inches; then deſcending 10 ½ Inches, it becomes 2 ½ Inches broad; thence it enlarges gradually till you come to the lower *Epiphyſis*, where meaſuring from the fore part of the *Cubitus* to its oppoſite and back part, the *Radius* is 8 ½ Inches; thence you deſcend 3 Inches, to its articulation with the internal Bone of the firſt rank of the *Carpus*. This Bone is quadrangular above, deſcending to about the middle it becomes more convex; from thence it is gradually enlarged, and during the whole Progreſs pretty free from the *Cubitus*, except where 'tis conjoin'd with it at its upper part: At the lower articulation, the one is only ſeperated from the other by a Cartilage. The lower *Epiphyſis* of theſe Bones is of a very unequal ſurface, and though not ſeperated from them by boiling, yet plainly diſtinguiſh'd by their Cartilages, which are not yet Oſſified.

The Fore Foot
Carpus.

The Fore Foot (as the Hand in human Subjects) conſiſts of the *Carpus*, *Metacarpus*, and Fingers, or rather Toes. The *Carpus* has 6 Bones diſpos'd into 2 Ranges, differing in Figure from each other, rugous before, endued with ſeveral Holes for tranſmiſſion of Blood Veſſels, and of a convex Surface behind, having ſeveral inequalities for Inſertion of Tendons.

External Bone of the firſt Rank.
Tab.4.Fig.8.

The External Bone of the firſt Rank (1) is an irregular Bone, running forward with a convex Surface, till it meets with its Copartner, 5 ½ Inches; paſſing in a more direct line 3 ½ Inches behind. It has 3 Faces: Its upper View, in the Figure, whereby it is articulated with the *Cubitus*, from behind to before is 2 ½ Inches, from the right to the left 3 ½ Inches. At the fore part it has a Prominence which is receiv'd by the *Cubitus*, from which the Bone declines as it runs backward, and forms a depreſſion about the middle, riſing higher at the hind part. At each ſide, on the right and left, it receives the *Cubitus* by two Superficial *Sinus's*. Its Second Face, whereby it is receiv'd by the ſecond Bone of this Rank, runs from before to behind 2 ¼ Inches. It is very narrow, and only touches it Copartner of the lower part; for betwixt this and the other is a ſmall Cavity, whoſe Surface compos'd by both Bones is unequal for the Inſertion of Tendons, and perforated with ſeveral Holes for immiſſion and egreſs of Blood Veſſels: Its lower Surface is articulated with the outer Bone of the ſecond Rank by a *Ginglymus*; *i. e.* behind it has a *Sinus* for receiving that below it. About the middle it has a ſmall Prominence which is receiv'd by the other, and both are conjoin'd by a plain Surface behind. From before to behind it is 3 Inches, and from the right to the left 4 Inches, being 1 ½ thick. It has three Protuberances; one larger at its outſide, more obtuſe; one leſſer below that more ſharp, extended a little further to cover a part of the outer Bone of the ſecond Rank; and a third on its inſide towards its Copartner: Beſides theſe, it has another ſmall Face at its upper and back part, which runs 2 Inches from the right to the left, and ½ Inch from above to below, being alſo conjoin'd obliquely with the back part of the *Cubitus*. This Bone weighs 6 ℥.

The Second

The ſecond Bone of the firſt Rank (2) is of the ſame thickneſs with the former, being articulated with the *Radius*; it is 3 Inches from the right to the left before. At its middle it has a *Sinus* on each ſide; one towards the former, making up with it the forenam'd Cavity, the other on its oppoſite ſide, where it receives the third Bone of this Rank; ſo that here 'tis only 2 Inches Diameter, and further back but 1 ½ Inch: From behind to before it is 3 Inches, and behind 'tis articulated with the *Radius* by a *Ginglymus* alſo, for before 'tis received by a ſmall Production of the *Radius*; about the middle it receives the *Radius*. This Bone weighs 5 ℥.

The Third

The third Bone of this Rank (5) is only articulated with the former at the ſide, where 'tis receiv'd into the forenam'd *Sinus*, above which it is alſo receiv'd by the *Radius*. It runs 1 ½ Inch higher than the former, and as much lower; ſo that it is 4 ½ Inches from above to below, making up almoſt the whole inſide of the *Carpus*. It terminates above in an obtuſe point, from thence it becomes ſtill broader, ſo that 'tis 2 Inches from above to below. At its lower part it reſts upon the ſecond and third Bone of the ſecond Rank: It weighs 3 ℥.

The firſt Bone of the ſecond Rank.

The firſt Bone of the ſecond Rank (3) in its fore and outer ſide follows the ſame Progreſs with that above, being 6 Inches from behind to before, where 'tis conjoin'd with its Partner; and from before, at the Articulation with its Partner, to behind 4 Inches; from the right to the left behind, where it is broadeſt, 3 Inches.

Its Surface behind is unequal for the reception of Tendons. It is articulated above with the firſt Bone of the firſt Rank, and with 3 Bones of the *Metacarpus* below, and at its inſide with its Partner of the ſame Rank. Its articulation above is *per Ginglymum*, as is ſaid; *i. e.* before and behind 'tis receiv'd by that above, and at the middle it receives it: It is 2 ½ Inches thick before. It weighs 6 ℥.

The ſecond The ſecond (4) which is much like to it, as being received by the ſecond above after the ſame manner, is 3 Inches on its convex Surface, and 2 ½ Inches tranſverſely at its middle. At its outſide, being the inſide of the Foot, it mutually receives the

The third Third (5) which runs obliquely backward 2 Inches from the former: It has four Surfaces for Articulation; one where tis join'd with the third Bone of the former Rank; the ſecond where it is join'd with the laſt nam'd Bone: In conjunction with the former it receives the 5th Bone of the *Metacarpus*; and at its outſide the 6th. It terminates in an obtuſe point behind, and has a *Sinus* betwixt the Articulation of the Bone of the *Metacarpus* and its extremity. The 2d weighs 6 ℥, and this 4.

Bones of the Metacarpus, *Tab.* 2. *G.* 8. There are Six Bones in the *Metacarpus, per Ginglymum longum*; *viz.* they are receiv'd above by the Bones of the ſecond Rank of the *Carpus*, and below by the Toes. They are all of much about the ſame Figure, but not of an equal length; ſomewhat flat before, and both convex behind; broader at the upper and lower extremity where they touch one another, and narrow in the middle.

The firſt on the outſide is 3 Inches long, and 4 ½ Inches round its middle, and articulated with the external part of the outer Bone of the ſecond Rank of the *Carpus*; in weight 3 ℥.

The ſecond is 4 Inches long, and 5 ½ Inches round its middle; flat before, and more convex behind; and articulated with the middle of the foreſaid Bone of the *Carpus*. It weighs 4 ℥.

The third is 5 Inches long, flat alſo before, and 7 Inches round its middle; articulated with the foreſaid Bone of the *Carpus*, and occupying moſt of its inner Surface. It weighs 6 ℥.

The 4th is 5 Inches long, and 6 round its middle. This occupies the largeſt part of the middle Bone of the ſecond Rank of the *Carpus*. It weighs 6 ℥.

The 5th is 4 ½ Inches long, of the ſame bigneſs with the former; and occupies a part both of the middle and of the internal Bone of the ſecond Rank of the *Carpus*; and weighs 4 ℥.

The ſixth is 3 ½ Inches long, and 5 ½ Inches round its middle; and occupies the external part of the ſecond Bone of the *Carpus*, and weighs 3 ℥.

The Bones of the Toes of the Fore-Foot. Tab. 2. G. e.

Each of the Toes of the Fore Foot conſiſts of two thick ſhort Bones; whereof the firſt of the external Toe is 5 ½ Inches round, and 1 ⅔ Inch long; the ſecond about 1 Inch broad, and ½ Inch long; weighing 2 ℥. The firſt Bone of the ſecond Toe is 2 Inches long, and 6 ½ Inch round; the ſecond is 1 ¾ Inch from the right to the left, and ½ Inch from above to below; weighing 3 ℥. The firſt Bone of the third Toe is 2 Inches long, and 7 ½ Inches round: The ſecond Bone is divided into two in this Subject, in figure not unlike an Oxes Hoof, whether it be a *Luſus Naturæ*, or peculiar to all other Animals of this Species I know not. Weigh 4 ℥. The firſt Bone of the fourth Toe is 2 ½ Inches long, and 5 ½ Inches round: The ſecond Bone is in figure not unlike the former, but not divided; from the right to the left 2 Inches, and from above to behind 1 Inch. Weigh 4 ℥. The firſt Bone of the fifth Toe is 2 ½ Inches long, and 4 ½ Inches round: Its ſecond Bone is in figure like the former, but leſs, and divided. Weigh 3 ℥. The firſt Bone of the ſixth Toe is 2 Inches long, and 4 ½ Inches round; bigger at the upper and becoming narrower at its lower extremity, wherewith a very ſmall Bone is articulated, and weighs 1 ½ ℥.

The Oſſa Seſamoidea.

All theſe are beſides two *Oſſa Seſamoidea*, which were affix'd to the lower part of the lower extremity of each Bone of the *Metacarpus*; each being about 1 Inch long, ½ half Inch broad, Protuberant at the lower part, and concave at their upper or that ſide whereby they are articulated with the *Metacarpus*; ſeperated from each other by an *Cartilage*, which did run down in the middle of this lower *Epiphyſis* of the Bone in the *Metacarpus* Theſe *Oſſa Seſamoidea* were very uſeful for ſupporting the Foot; for about their middle did all the four Hoofes of the Fore Foot terminate. They weigh each ℥ij.

The Hind Extremities conſiſt of the *Oſſa Innominata*, the Thigh Bone, the two Bones of the Leg, and the Foot.

The Oſſa Innominata *Fig.* 4. 5.

The *Oſſa Innominata* conſiſting, as in other Animals, of two large Bones, articulated behind with the *Os Sacrum* on each ſide, and before with each other *per Synchondroſin*, as 'tis call'd, each may be divided, as in Human Subjects, into the *Ilion*, or upper and external part, *Os Pubis*, or lower and fore part, and *Iſchion*, or lower and back part: Though ſtrictly ſpeaking, theſe Bones here ſhould only be divided into the *Ilion* and *Pubis*, there being no remarkable part about them which deſerves to be pointed out by the Name of *Iſchion*. Both theſe *Oſſa Innominata* join'd together, *The* Pelvis. make up the *Pelvis*, which in Circumference is 4 Foot 6 Inches. From the *Os Sacrum* above B. to the upper part of the *Os Pubis* below C. it is 18 Inches, and from the Right D to the Left E. 17 Inches. The *Os Pubis* at the Articulation is from above C. to below F. 12 Inches; betwixt the two outer and lower Extremities of the *Ilion*, from the Right G. to the Left H. is [illegible] ½ Foot; from the *Os Sacrum* above, along the Margin of the *Os Ilion*, down to the fore-mention'd utmoſt Point is 2 foot 9 ½ Inches G. H. and from that ſame Point H. to the *Acetabulum* which receives the *Femur* K. 1 foot. This *Acetabulum* is in Circumference, round the External Edge, 18 Inches. The breadth of the *Os Ilion* from the External Edge H. to the ſide of the *Pelvis* E. is 13 Inches. Ronnd the Neck of the *Ilion* above the *Acetabulum* M. M. is 14 Inches. The height of the *Oſſa Innominata*, from the upper part of the *Ilion* to the *Acetabulum*, 22 Inches. The breadth of the *Os Pubis* from the Articulation with its Partner, to the outſide N. N. 8 Inches. The length of the Oval Hole for the *Muſculus Marſupialis* O. O. 5 ½, its breadth 4, its Circumference 13 Inches. Betwixt the lower and utmoſt Extremities of the *Os Pubis* behind, R. R. 17 Inches. Theſe *Oſſa Innominata* are flat before, ſtanding almoſt perpendicular with the two lower and utmoſt Extremities of the *Os Ilion* G. H. bending forward, having the *Os Pubis* aſcending obliquely, convex before, where join'd together, and concave behind. This aſcent of the *Os Pubis* is a further Argument, that this is no Retrocoient Animal.

Femur. *Tab.* 2. L. The *Femur* is 3 foot long with its upper *Epiphyſis* (1.) in circumference 15 Inches; the Neck below it is 13 Inches; the breadth from the great *Trochanter* (2.) on each ſide 10 Inches; below this *Trochanter* in circumference 18 Inches; about the middle 12 Inches; round above the lower *Epiphyſis* 16 Inches; round the lower *Epiphyſis* itſelf (3.) from the *Patella* (4.) on the outſide to its oppoſite part on the inſide, 18 ½ Inches. Its Diameter, where articulated with the *Tibia* behind, is 7 Inches; having two Protuberances, whereof the External is 2 ½, and the Internal 3 ½ Inches. The Internal *Epiphyſis*, which is received by the *Tibia*, is from before to behind 7 Inches, and the External 5 ½ Inches. The *Femur* is in general a long ſtreight Bone, having a big round Head (which in this Subject is ſeparated from its

Body by a Cartilage, ſtill an Argument of the Youth of the Animal) receiv'd by the *Oſſa Innominata* (1.) A large *Trochanter* on the outſide, where the Bone is broadeſt; from thence in its deſcent it becomes ſmaller, flat before and behind, and thicker on the inſide than the outſide, near to an equal bigneſs, till it comes to the lower Extremity, where 'tis enlarg'd into two big *Epiphyſes*, which are receiv'd by the *Tibia*, with a *Sinus* in the middle about one Inch deep, and as much Diameter. It ſends forth a large Protuberance before, which is received by the

Rotula

Rotula, or *Patella*, a Bone of a very rugous Surface, conſiderably Protuberant on the outſide, being from above to below 8 Inches, and from the Right to the Left 6 Inches. It is articulated with the *Femur per Ginglymum*, having a Cavity on each ſide which receives, and a Protuberance in the middle receiv'd by the *Femur*.

Tibia.

The *Tibia* is in length, meaſuring behind, 22 Inches; its circumference at the upper *Epiphyſis* 19 Inches, and at the Neck 17 Inches. Before it has a large Depreſſion for facilitating the Motion of the *Patella*; of a very rugous Surface, for Inſertion of the *Extenſores Tibiæ* 'Tis almoſt Semicircular before, and flat behind: Its circumference about the middle is 9 ½ Inches, and at the lower Extremity, where it again meets with the *Fibula*, and where it receives the *Aſtragalus*, 12 Inches.

Fibula.

The *Fibula* is 21 Inches long; 5 ½ Inches round above, where receiv'd by the *Tibia*; 3 Inches about the middle; and 5 Inches at the lower part, where it receives the *Tibia* Its *Epiphyſis* which forms the External Ancle, or *Maleolus*, meaſuring from before to behind along its outer Surface, is 5 ½ Inches.

The Bones of the Hind Foot.

The Bones of the hind Foot conſiſt of thoſe of the *Tarſus*, *Metatarſus*, and Toes. The *Tarſus* conſiſts of 6 Bones, whereof

Aſtragalus. *Tab. 4. Fig. 9.*

The firſt is call'd *Aſtragalus* (1.) This is articulated above with the *Tibia*, having a Depreſſion in the middle 3 Inches, which receives, and two Protuberances at the Sides, which are receiv'd by the *Tibia*, 3 ½ Inches. It receives the *Talus* below with a Surface 4 Inches Diameter. On the inſide it ſends forth a large Protuberance; and on the outſide both it and the *Talus* are received by the External *Maleolus* for the ſpace of 2 Inches. Before, 'tis receiv'd by the *Os Naviculare* during the ſpace of 4 ½ Inches. It is in Weight 6 ℥.

Talus. *Fig.* 7.

The *Talus (a.)* is a very irregular Bone; it is Protuberant behind from the *Aſtragalus* 4 ½ Inches. This Protuberance is in circumference at the Extremity 10 Inches, and at its Neck 8 Inches: Below it is very rugous on the inſide. It ſends forth a Protuberance, which is received by the *Aſtragalus*, as in Human Subjects. It has three remarkable Surfaces; *viz.* one upon which the *Aſtragalus* reſts, at its upper ſide; one at the fore-part, articulated with the *Oſſa Cuneiformia*; and the outſide, for the *Fibula*. It weighs 1 ℔.

Os Naviculare. *Fig.* 9.

The *Os Naviculare* is 10 ½ Inches in Circumference, one Inch thick, concave behind (2.) where it receives the *Aſtragalus*, and convex before, with its different Surfaces *(3.) viz.* one whereby it is articulated with the Bone of the Toe on the inſide, and one for each of the three *Wedge-like* Bones. It weighs 4 ℥.

Oſſa Cuneiformia.

The Bones of the ſecond Rank of the *Tarſus* are call'd the Three *Wedge-like* Bones, two of which are articulated at the back-part with the *Os Naviculare*, as is ſaid, and the third partly with the *Talus*, and partly with the *Os Naviculare*; each of them is about 1 Inch thick: That on the inner Side (4.) is the leaſt, being from the Right to the Left one Inch thick, in Weight ℥iſs: The middle 2 Inches *(5.)* in weight ℥*ij*; and that on the outſide (6.) 3 ½ Inches, in weight ℥*iij*. This laſt has two Surfaces at the fore-part, whereby 'tis articulated with the two utmoſt Bones of the *Metatarſus*. The middle Bone of the *Tarſus* being only receiv'd by the middle Bone of the *Metatarſus*.

The Bones of the Metatarſus.

The External Bone of the *Metatarſus* is very irregular: It is articulated behind with the External *Os Cuneiforme*, where 'tis about 2 Inches from above to below; from whence (its External Surface being very rugous) it becomes gradually ſmaller; being ſomewhat Concave below, and Protuberant above, till it terminates in a round Extremity. In Weight ℥*ij*ſs.

The ſecond is a ſhort thick Bone, 8 Inches in Circumference, and 2 ½ Inches long; in weight ℥*ij*ſs. This receives the firſt Bone of the Toe, which is 4 ½ Inches in Circumference, and 2 long; and receives the ſecond Bone of the ſame Toe, being 3 in Circumference, and 1 ½ long; greater at its upper, and ſmaller at its lower Extremity, to which is affix'd a ſmall Bone. Theſe Weigh ℥*iij*ſs.

The middle Bone of the *Metatarſus* is the largeſt of all thoſe belonging to the Toe, being 7 Inches round, and 5 long; ℥*iiij* in Weight. It receives the firſt Bone of the Toe, which is 4 ½ Inches round, and 2 ½ long; to which alſo is join'd another ſmall Bone to make up the Extremity: In Weight both ℥*iiij*.

The two Bones of the *Metatarſus* remaining are thin, broad, and irregular; the firſt whereof is 2 ½ Inches broad, and 2 ¾ long; weighing each ℥i. to which alſo adheres a ſmall Bone, as in the former Toe, but leſs. The ſecond and laſt of the *Metatarſus* on the inſide is two Inches broad, and as much long, thin like the former, having a ſmall Protuberance adjoin'd inſtead of a Toe. The Bones of the 4th Toe weigh ℥jß, and the 5th ℥j.

Compariſon of theſe Bones with thoſe treated of by Tentzelius.

I once deſigned to have compar'd more particularly the Bones now deſcrib'd, with thoſe of *Tentzelius* and Dr. *Moulins*: But ſince both theſe Treatiſes have been already communicated to the *R. S.* and I doubt not are in the Hands of moſt of the Honourable Members thereof; and ſince I have already inſiſted longer upon theſe, than I ſuppoſe you expected, I ſhall only put you in mind in few Words, that *Tentzelius* tells his Friend, that in digging in a Hill near *Erfurt* in *Germany* for a fine white Sand, there were found ſeveral huge Bones, firſt miſtaken for a Giants; but upon tryal, and the peruſal of Dr. *Moulins*'s Treatiſes, known to be the Bones of an *Elephant*: And that among the reſt there were found the Head 42 Inches Diameter; two Tusks 2 ½ Spans large, and 8 foot long; four Grinders, each 12 ℔. the *Humerus* 4 foot 2 ½ Spans; the *Vertebra* of the Neck, each 4 Spans in Circumference, and 2 Spans high; the *Oſſa innominata* 2 ½ foot long; with the Head of the *Femur* inſerted in the *Acetabulum*, and part of the *Tibia* 22 Inches at the biggeſt, and 17 at the ſmalleſt part: That they were obliged to dig 24 foot deep, before they could get out the Head; that the Bones lay in ſuch a Poſture, as betoken its being over-whelm'd, or having had great Struglings while a dying; *viz.* the Left fore Foot ſtretch'd forward to the ſide of the Head, which lay toward the North, the Right inclining backward under the Body; the Left hind Foot drawn in toward the Body, and the Right diſtorted here and there, out of its Natural Poſture. From all which he concludes this to have been the largeſt *Elephant* that ever was ſeen in *Europe*; and that it could be brought hither by no other means than the Flood, both from the Preternatural poſture of the Body, and from the different *Strata* of Earth lying above it, without the leaſt ſign of having been digg'd to bury it.

A Table containing the particular Dimenſions of the Vertebræ *and* Ribs, *and Weight of all the Bones of the* Elephant.

The Bones of the Head.	℔
Upper Jaw	66
Lower Jaw	45

The *Vertebræ* of the Neck.

Numb.	Weight. ℔	℥.	ʒ.	Length of Spinal Proceſs. Inch.
1	1	13		
2	1	6	4	
3		13	4	¾
4		13	4	½
5		14	4	1½
6		14	6	3
7	1			5
	7	10	6	

The *Vertebræ* of the Tail.

Numb.	℥.	Length. Inch.	Breadth. Inch.
1	10	2	6
2	8		5 2/1
3			5
4	6		4½
7			4
8	5		
9	4		3½
10			3
11	3		2½
13	2⅔		
14	2½		1⅔
15			1
16	1¼		2½
17	1		
18		1⅔	
20		1½	
21		1¼	
22		1	2¼
23	⅔		2
24			1¾
25	½	½	
29	⅔		

The *Vertebræ* of the Back.

Num. No.	Weight. ℔.	℥.	ʒ.	Length of Spinal Proceſs. Inch.	Breadth of Extrem. Inch.
1	2	4		8	2
2	2	2		12	3½
3	2			13	4½
4	1	5			
5	1	4	2	12	3½
6	1	2	3	11½	3
7		15	6	11	
8		14		10½	2½
9		14		10	
10					
11					
12		13		9½	2
13				9	
14					½
15				6½	1½
16				6	2
17				5	
18			2	4½	
19			4	3	
	20	8	7		

The Ribs.

Weight. ℔.	℥.	ʒ.	L. of inner Surface. Feet.	Inch.	L. between Extrem. Feet.	Inch.	Breadth of Extre. Inch.
1	13		1	5	1	4	4
	12	4		9		8	3
1	1	2		11½		10	
	5		2	2	2		
	8	4		6		3	2½
	2	3				3½	
	1	5		8		3¼	2½
	4	6		10		4½	
	3					5	
	15			9		3	
	14	4		7			
	13	4		5		1	
	12			4			
	10	6		½	1	11½	
	9					10	[illegible]
	5	5	1	9		8	
	5			8		7	
	3	2		5		4½	
	2	1					
16	15	6					
16	15	6					

The *Vertebræ* of the Loyns.

1	13	4	3
2	12	7	
3	11		
	2	5	3

	℔	℥	ʒ	
Weight of Ribs	33	15	4	
Tail	4	2	7	1 ℈

The

The Sceleton of the Elephant conſiſts of the Bones of

		℔	℥	ʒ	℈
The Head divided into thoſe of the					
Upper Jaw, *viz.*					
Calvaria, or upper and back part	1				
Frons, or upper and fore part	1				
Two *Maxillary* Bones	2				
Two Bones of the Palate	2				
Two *Zygomatic* Bones	2				
Two *Styloid* Proceſſes	2				
Two Tusks	2				
Four Grinders	4	66			
Lower Jaw	1				
Four Grinders	4	45			
	21	111			
The Trunk compoſed of the					
Spine conſiſting of the *Vertebræ* of the					
Neck	7	7	10	6	
Back	19	20	8	7	
Loyns	3	2	5	3	
Os Sacrum	5	4	0	0	
Tail	29	4	2	7	1
Ribs, 19 Pairs	38	33	15	4	
Sternum	4	3	00	0	
	105	75	11	3	1
The Fore Extremities					
Scapula	2	19	08	0	0
Humerus	2	16			
Cubitus and *Radius*	4	15			
Carpus, Six on each Foot	12	3	12		
Metacarpus	12	3	4		
Toes	24	2	3		
Oſſa Seſamoidea	24		6		
	80	60	1		
The Hind Extremities					
Oſſa Innominata, viz. *Ilion* *Pubis*	2	28	00		
Femur, or Thigh Bone	2	16			
Tibia and *Fibula*, or Leg and Spit Bone	4	13	4		
Patella, or Knee Pan,	2		12		
Tarſus	12	5	10		
Metatarſus	12	1	06		
Toes.	20	1	02 ½		
	54	66	2 ½		
Summa Totalis	260	312	14	7	1

This is the Total Sum of the weight of the Bones.

The Method of mounting the Sceleton.

I come now to the laſt thing I propos'd, which is the Method I us'd in mounting the Sceleton; and becauſe Dr. *Moulins*'s way of nailing a Plate of Iron to the Roof of the Mouth, in which the Iron Rod that run through the *Vertebræ* of the Neck was faſtned, would have been inconvenient, by ſpoiling the back-part of the Scull, obſtructing its View, and making the Head look too much forward, which was the fault of his Sceleton, as repreſented by the Figure, I contriv'd another, which is as follows.

Connexion of the Head.

There was an Iron Rod made about the bigneſs of one for a Bed, as long as the *Elephant*, from the Forehead to the Point of the Tail, being 14 Foot, which paſs'd in at the fore-part of the Scull above the Hole for the Root of the Trunk, and run back amidſt the fore *Cellules*, paſſing along the lower part of the Seat of the Brain, and going out at the lower part of the Hole for the Spinal Marrow; and leſt the inconveniency of its Weight (as Dr. *Moulins* fear'd) ſhould happen to break the tender *Laminæ*, there was another Rod of the ſame bigneſs, which paſs'd in at the one ſide of the Head, where the Depreſſion is for Inſertion of the Muſcles of the Lower Jaw and *Proboſcis*, and run through the *Cellules* at the ſide, going tranſverſely along the lower part of the Seat of the Brain below the former, and paſſing out at the other ſide; by which this Rod, from the Right to the Left, eaſes the Burthen of the other, in ſupporting the Head on both ſides, as well as the other did before. And leaſt any of theſe ſhould ſlide out, I caus'd to be ſcrew'd a Piece of Iron upon each Extremity of that which paſs'd from the Right to the Left, and upon the fore end of that which did run from before to behind. Afterwards the ſecond *Vertebra* in the middle of its Tooth, and all the other following *Vertebræ* were perforated in the Center of their Bodies; and to make the Head ſtill more ſteady, the Baſe of the Scull was twice perforated on each ſide of the Hole for the Spinal Marrow; and a ſtrong Wire being paſs'd through theſe Holes, it run from the Right to the Left above the Rod, and kept it firm, leſt it ſhould have bended, and ſuffer'd the Head to incline too much downward by its Weight.

Connexion of the lower Jaw.

The joining of the Lower Jaw, which is perhaps the moſt ponderous Bone in any Land Animal, was next to be conſider'd; therefore two Wires were paſs'd in at about one Inch diſtant from each other, running from above to below, to that part of the Baſe of the Scull (*y*) which is for Reception of the *Condyles*; *Tab.* 3. *Fi* 3. and the ſame two Wires having paſs'd through two Holes, made from before to behind in the *Condyles* themſelves, both Extremities of the Wires were made to meet together at the upper and outer part of the *Condyles*, and ſo twiſted and made firm. Being ſtill ſuſpicious that this would not be ſufficient to ſupport ſuch a vaſt Weight, and fearing leſt either the Baſe of the Scull or the *Condyles* might come to ſuffer, there was a Wire brought round the Margin of the ſo often mention'd great Hole in the *Os Maxillæ Superioris*, which being folded, was twiſted ſeveral times toward the *Proceſſus Coronæ* in the lower Jaw (*b.*) where there were two Latchets, or Foldings of Wire plac'd in the inner ſide; the folded Wire from the *Os Maxillæ* was brought in betwixt them, and a Pin paſs'd through all three, to be taken out at pleaſure. And leſt theſe ſhould not ſtill be ſufficient to ſupport its Weight, there was provided in the third place a folded Wire from behind to before in the *Symphyſis Menti* (*h.*) which paſſing in betwixt the *Fig.* 9. two *Oſſa Palati* (*b.*) a Pin was put acroſs them, to be taken out *Fig.* 1. at pleaſure; which is ſuch a Relief to the *Condyles*, that without making uſe of the Wires running from the *Os Maxillæ* to the *Proceſſus Coronæ*, we found it ſufficient to ſupport the Weight of the Jaw; and 'tis ſo much the more convenient, that by pulling out this Pin, the lower Jaw can be brought back and forward, to ſhew the Spectators its conſiderable Weight.

Connexion of the upper part of the Scull.

Being obliged to ſaw the Scull, in order to take out the Brains, for faſtning the upper part of it, there were two Wires plac'd at the back-part of that which is below the Diviſion; into which are linked two other Wires, which reach to that part above the Diviſion, and are there receiv'd into two foldings of Wire plac'd there on purpoſe. The ſame Contrivance is alſo obſerv'd before; ſo that this upper part may either be laid back, to ſhew the Structure and Contrivance of the *Cellules*, or taken altogether off, as ſeems good.

The Joining of the Vertebræ and Ribs.

The *Vertebræ* being all perforated, my next Care was to have the Ribs match'd and join'd; in order to which, having firſt ſuited them in Pairs, and fitted each Pair for its *Vertebra*, I caus'd to be perforated each of their *Epiphyſes* twice from above to below, (once toward the fore, and once toward the back part) and the tranſverſe *Proceſſes* of the proper *Vertebræ* oppoſite to the Holes of the Ribs, after the ſame manner; and then perforated the Ribs at the Extremity toward the *Vertebræ*, and the *Sinus* of the

Vertebræ (correſponding to the Rib) in toward its Body: After which a Wire two Inches long was faſtned in the Body of the *Vertebra*, and Extremity of the Rib, and then both were brought together; which being done, the Wires were put into their reſpective Holes in the tranſverſe *Proceſſes* and Ribs, and both the ends of each of the two laſt Wires, being brought together at the upper part and Interſtice betwixt the Ribs and tranſverſe *Proceſſes*, were twiſted and made firm. Thus I continued to do throughout all the Nineteen Pairs.

Leather, inſtead of Cartilages.

After this I provided ſome Jumps, or Leather, ſuch as Shoemakers uſe for the Heels of Shoes, becauſe the Bend or Sole Leather us'd in mounting the Sceletons of other Animals, could not be ſo conveniently fitted as to its thickneſs. Having wetted and beat this Leather, it was ſhapen'd according to the bigneſs of each *Vertebra*, perforated in the middle, and put upon the Rod alternatively, firſt the *Vertebra*, and then the Leather, to ſupply the defect of the Cartilages, which were all loſt in boiling, as uſually happens, and was beat ſo cloſe, that the oblique *Proceſſes* of the *Vertebræ* might meet. This was continued till all the *Vertebræ* were upon the Rod, all along to the *Os Sacrum*; and becauſe the firſt *Vertebra* is nothing concern'd with the Rod, 'twas convenient to paſs a Wire betwixt the Scull and it on each ſide, that it might not remain looſe, but be fix'd to the *Condyles*, by twiſting and making faſt the Wire.

Connexion of the Oſſa Innominata.

I came next to the *Oſſa innominata*, which had been disjoin'd in Boiling, both before or below at the *Os Pubis*, and above or behind at the *Os Sacrum*. I made two Rods of Iron to paſs tranſverſely from the one ſide (the one above, and the other below) through the *Os Sacrum* to the other. Theſe were riveted on the back ſide at both ends; and then having perforated the *Os Sacrum* from above to below through the middle of its Body, it was alſo put upon the Rod for the Spine, which was a very difficult Task, becauſe the Rod being thick was uneaſy to bend, and the Situation of the *Os Sacrum* requir'd it to be bended preciſely, betwixt the laſt of the *Vertebræ Lumborum*, and the *Os Sacrum*. Neither was it eaſy to perforate the *Os Sacrum* itſelf, being obliged to make a Drill on purpoſe, there being no other Bone in the Body that requir'd one ſo long. After this I proceeded to put on the Bones of the Tail, and their Sham Cartilages alternatively, as they followed in order, till all the Rod was fill'd, on whoſe Extremity another Piece of Iron was ſcrew'd, to keep all firm and ſecure.

Connexion of the Sternum, *and mounting the* Thorax.

Afterwards a large Wire was paſſed from the fore to the hind part of the *Sternum*, whereby all its Bones were fix'd to one another; and to them were joined pieces of Bend Leather to ſupply the Cartilages, which had been firſt mangled by the Butchers, and then loſt in the boiling. Theſe I fitted to the Articulation of each Rib, whereto they were join'd; and perforating the Extremities of the Ribs twice, I paſt two Wires betwixt the Sham Cartilages and them, bringing the two ends together, twiſting and faſtening them on the inſide, by which all the *Thorax* was mounted. And leſt the Ribs thus fix'd at both Extremities ſhould be too ready to move from before to behind, and *è contra*, each of the Ribs was perforated above toward the Back, and below toward the Belly, for receiving of Foldings and Latchets of Wires to be faſtned in them. Then I provided two big Wires, each being folded twice, the length of the *Thorax*; one of which being paſs'd through the laſt Rib, its two Parts being brought together, they were twiſted ſeveral times, till it was brought oppoſite to the Latchet in the next Rib, within which the one part was paſs'd, the other continuing without, and then twiſting again, till it came to the third; it was ſo continued throughout all the Ribs, both above and below, to keep them firm and at a due diſtance. And thus you have the whole Trunk mounted.

The Joining of the Scapulæ.

Next, I took the two *Scapulæ*, as belonging to the upper Extremities; and leſt they ſhould be too weighty for the Ribs, if nail'd to them, as is uſually done in other Sceletons, I thought fit to perforate both of them oppoſite to one another at their upper Margin, and to paſs a good big Wire through one of the Perforations, which being folded, was twiſted for the ſpace of 20 Inches, *i. e.* from the *Scapula* on the one ſide, ſtreight over the Back, paſſing in betwixt two of the *Vertebræ*, till it came to that on the other, where it was faſtned. Afterward both the *Scapulæ* were faſtned, by bringing two folded Wires from the outſide of each *Scapula*, through the firſt and third Rib, in whoſe inſide they were fix'd; then was the Head of the *Scapula* perforated through the Margin which guards the *Humerus* at the fore and back-part.

Connexion of the Humerus.

The Head of the *Humerus* oppoſite to the middle of the Concave part in the *Epiphyſis* of the *Scapula*, was four times perforated, twice toward the inſide, and twice toward the outſide; whereinto were put two folded Wires, whoſe Extremities were fix'd below at the foreſaid inner and outer part, and into whoſe Foldings a large Pin paſs'd from the Margin of the *Scapula* on the one ſide, to that on the other, (to be pull'd out at pleaſure) for ſuſpending of the *Humerus*.

Cubitus *and* Radius.

The *Cubitus* and *Radius* were join'd with the *Humerus*, thus: The *Cubitus* was perforated twice in the back part, at the beginning of the *Olecranon* on each ſide; where two Extremities of Wires being fix'd and riveted, they were brought through the upper part of the ſaid *Olecranon*, and then twiſted, till they came to the *Humerus*, which was perforated from the back-part, where the Depreſſion for receiving the *Olecranon* is, to the fore part above the *Epiphyſis* received by the *Cubitus* and *Radius*; through which Holes made pretty large, the Wires thus twiſted were paſs'd, the one to the *Radius* on the outſide, and the other to the *Radius* on the inſide; where they were introduc'd, and brought out at the back-part of the *Cubitus* below the *Olecranon* on each ſide, where their Extremities were riveted 2 ½ Inches below their Inſertion: By which means the Flexion and Extenſion can be eaſily ſhewn, becauſe the Wires have ſufficient ſpace to move in their Paſſage through the *Humerus*, theſe Holes being made bigger on purpoſe, as is ſaid. The lower *Epiphyſis* of both *Cubitus* and *Radius* having been ſeparated by boiling, as I have formerly obſerv'd, I was forc'd to perforate each of them below toward the *Carpus*, and paſs a Wire obliquely upward, whereby to ſecure them: And becauſe the *Radius* is diſtinct from the *Cubitus* below, there was a Wire paſſed from the one to the other, and riveted at each outſide.

The Fore Foot.

In joining the Bones of the Foot, I took ſpecial care to hide the Wires, ſo that none might appear to the Beholders. For doing whereof the *Cubitus* was twice perforated in the back part of the *Epiphyſis*, about 1 Inch above the Articulation with the Bone of the *Carpus* on the outſide, and the *Radius* in the inſide and and back-part, after the ſame manner: Both which Perforations were continued through the two Bones of the firſt Rank of the *Carpus*. Afterwards the External Bone was perforated a third time; all which run from above to below, to the firſt, ſecond, and third Bone of the ſecond Rank. Which being done, two folded Wires were paſs'd in at the four Holes of the back part of the *Cubitus* and *Radius*, where their Duplicatures were formed; and the fifth Wire put into the Hole made in the middle of the External Bone of the firſt Rank of the *Carpus*, was continued with the reſt through the Bones of the ſecond Rank to thoſe of the *Metacarpus*, where they run from one Extremity to another; that is to ſay, the outer part of the folded Wire from the *Cubitus*, did run down the outſide of the External Bones of the firſt and ſecond Rank of the *Carpus*, to the External Bone of the *Metacarpus*, all along, till it was brought out at the Extremity of the furtheſt Bone of the Toe belonging thereto; and the inner part of the ſame Wire paſſing from the *Cubitus* through the ſame two Bones of the *Carpus*, ran down to the third Bone of the *Metacarpus* from the outſide, from whence 'twas convey'd to the Extremity of its Toe, and there riveted. The third Wire paſs'd from its entry in the middle of the External Bone of the firſt rank of the *Carpus*, to that of the ſecond, and from thence down to the ſecond Bone of the *Metacarpus*, from the outſide, to the Extremity of its Toe, where it was faſtned; and the folded Wire from the back-part of the *Radius* paſs'd down at two Places through the middle Bone of the firſt rank of the *Carpus*, to that of the ſecond rank, and from thence to the fourth and fifth Bones of the *Metacarpus* from the outſide, and ſtill forward to the Extremities of their Toes, where they were fix'd. This done, I caus'd to be perforated the External Bones of the *Carpus* twice, *i. e.* toward their fore and back part, as alſo the *Metacarpus* at the upper and lower Extremity; paſſing the Drills from the outſide to the inner of each Bone, or from the Right to the Left, by which the Bones above were as well join'd with their Sides, as with thoſe below them; ſo that each was kept ſecure in its Place, eſpecially the Bones of the *Metacarpus*, which would have too readily ſeparated from each other, and endanger'd the breaking the Wires, by which they were join'd with thoſe above. Since the third Bone of the firſt rank of the *Carpus* lies, as it were, at the ſide of both Ranks, therefore I thought it convenient to paſs the two Extremities of the Wire, which run from the right to the left, in the firſt Rank, that ſo it might be faſtned with its Partner on the inſide; and ſince the Internal Bone of the *Metacarpus* yet remain'd to be join'd, this inner Bone of the *Carpus* was again perforated, and a Wire brought from it to the inner Bone of the ſecond Rank, and from thence to the ſaid Bone of the *Metacarpus* with its Toe, where it was faſtned.

Connexion of the Femur.

The upper *Epiphyſis* of the *Femur* having alſo ſeparated by boiling, it was requiſite to perforate its Head four times, for the immiſſion of two folded Wires, which were brought obliquely down the inner and outer ſide to its Neck, where their Extremities were twiſted and ſecured. Afterward it was perforated in the middle four times more, for two other folded Wires, which were once or twice twiſted, and their Extremities put through the foreſaid Holes to the inner and outer part of the Neck of the *Femur*, as before, there to be made faſt. The *Acetabulum* was perforated in the bottom, and theſe two Foldings paſs'd through it; whereinto was put a Pin, at the back-part of the *Oſſa innominata*, to be pull'd out at pleaſure, and the Thigh ſuſpended as the *Humerus*.

Of the Tibia *and* Fibula.

Two folded and twiſted Wires were paſs'd in at the *Epiphyſis*, on each ſide of the *Spina*, in the middle of the *Tibia*, and their Extremities brought out at its upper and back part, where they were riveted: Afterward the lower *Epiphyſis* at the *Femur* was perforated from the right to the left, and a Pin paſſed from the out-ſide, through the Foldings of the Wires from the *Tibia*, to the in-ſide, (whereby the Flexion and Extenſion is moſt conveniently ſhewn,) to be taken out at pleaſure. The *Perone* was fix'd to the *Tibia* at the upper part, by a Pin paſſing obliquely upward from the one to the other; and the *Patella* faſtned to the fore-part of the *Femur*, by a Pin paſſing directly inward from before to behind.

Of the Hind Foot.

The lower part of the *Perone* forming the External *Malleolus*, is perforated from without to within, as is the oppoſite part of the *Tibia* forming the Internal one; likewiſe the *Aſtragalus* is perforated from the right to the left, correſponding to theſe two Holes, for the immiſſion of a Pin, whereby the Foot is join'd to the *Tibia*, to be pull'd out at pleaſure. The *Aſtragalus* is join'd to the *Talus* by a Pin, paſs'd from the upper and middle part of the one, to the lower part of the other, where it is riveted. The *Aſtragalus* is thrice perforated before; into two of which Holes a folded Wire is paſs'd, which goes forward through the *Os Naviculare* to the Bones of the *Metacarpus* of the ſecond and third Toe from the inſide, at whoſe Extremities they are fix'd. The third Wire runs from the *Aſtragalus* to the *Os Naviculare*, and the third *Os Cuneiforme*, to the fourth Toe. The ſaid *Os Naviculare* is perforated on the inſide for a Wire, which runs through the Bone of the *Metacarpus* and inner Toe. The third *Os Cuneiforme* is perforated for a Wire which paſſes through the Bone of the *Metacarpus* and outer Toe. The three *Oſſa Cuneiformia* are join'd to each other by a folded Wire, which runs twice from their outſide to the inſide, where they are ſecured.

Sir, By the Opportunity I have had of preparing and joining theſe Bones, it may be expected I ſhould give ſome Account of their Structure: But as the deſign of preſerving the Sceleton entire gave me no Liberty to go any further than their External Surface, ſo it cannot be expected I could dive any deeper in the Knowledge of them. *Tentzelius* ſays, *Omnia iſthæc Oſſa poroſa ſunt & rimoſa*; and I may add, *Levia* too: For there is nothing about them to be ſeen of that Solidity and Compactneſs, that ſmoothneſs of Surface, and Whiteneſs, which is obſervable in other Quadrupeds of the larger ſize, ſuch as Oxen, Horſes, Harts, *&c.* or ſmaller, as Sheep, Dogs, Cats, *&c.* And I ſhould have readily attributed this to the Youth of the Animal, had not *Tentzelius* from his Subject, ſuppos'd to be 200 Years Old, told the ſame. And this differs much from the Account of the *Behemoth* in *Job*, whoſe Bones are ſaid to be as ſtrong pieces of Braſs, and Bars of Iron. The *Laminæ* of the Head were thin and ſolid; the External Table thin and more ponderous; the Teeth exceeding ſolid and ponderous: So that from the computation of the Weight of the upper part, which was taken off by the Saw, as in *Tab*. 3. *Fig*. 5. and 6. which is only 6 ℔. weight, I may reckon all the Head, which weighs 66 ℔. beſide the Teeth, not to weigh above 24 ℔. at moſt; which well agrees with what *Tentzelius* ſays, that each of the *Dentes Molares* were 12 ℔. weight, and that of all the 45 ℔. which the Lower Jaw weighs, the reſt of the Bone beſide the Grinders do not exceed 12 or 16 ℔. For its External Surface ſeems to be both porous and rimous, as is ſaid; and at perforating the *Condyles* ſeem'd to be very ſpongy, as were the Ribs, *Femur*, *Tibia*, *&c.* where, after the Drill had paſs'd the External *Lamina*, which was very thin, it would have run forward as if it had been through ſo much Moſs. When the *Epiphyſis* came off the Thigh Bone, it reſembled very much the *Epiphyſis* of the *Femur* in Man; its minute *Cellules* were not ſo big as thoſe of an Oxe, and the *Laminæ* which circumſcrib'd them, not by much ſo ſolid. The *Humerus* indeed both above and below was much harder; it did heat the Drill in paſſing: And there may be ſome reaſon for that too; *viz.* that ſince the Progreſſion of moſt Quadrupeds chiefly depends upon a more frequent motion of the Fore than Hind Limbs, it does much more here, where the Head is proportionably more heavy than in other Animals. And this perhaps is the reaſon too, why the Fore Limbs in this Animal are brought ſo far forward; for meaſuring in a ſtreight Line from the *Humerus* above to the *Carpus* below, and bringing another Line directly backward at the Articulation betwixt the *Humerus* and *Cubitus*, from the perpendicular Line before to the point of the *Olecranon* behind, it is 20 Inches; which is the reaſon why ſome believe my Engraver has made the fore Limbs of the Sceleton to bend too much at the Articulation. The Bones of the *Carpus* are pretty ſolid, and by Perforation they ſeem only to have a little ſpongioſity about the middle: All the reſt of the Bones of the fore Foot are ſpongy. The *Aſtragalus, Os Naviculare*, and *Oſſa Cuneiformia*, are more ſolid; but the *Talus* and other Bones of the hind Foot ſpongious. The Spine was ſpongy, as is uſual; the *Oſſa Innominata* of a middle Conſiſtence; and the *Scapula* very thin, but ſolid toward its Neck. I cannot poſitively determine the Cavities for the Marrow, nor quantity of it; but by comparing the Dimenſions with the Weight and ſmall quantity of Fat to be ſeen at the boiling, we may ſuppoſe it not to have been much in this Animal: I know not how it may be in others of this Species.

I muſt not forget to tell you, that when I weighed the Bones, it was immediately before they were joined; ſo that their weight was much diminiſh'd, in reſpect of what it was when they were newly boil'd. The weight is ℥16. to 1 ℔. and the meaſure, according to the *Engliſh* Yard, 12 Inches to a Foot, and 12 Lines to an Inch.

And thus, *Sir*, I have finiſh'd theſe my Weak Endeavours: The Undertaking, I doubt, will ſeem bold to ſome, and raſh to others, and the Performance mean. But the many Obligations you have laid upon me, and the frequent Marks of Eſteem I have received in your ſeveral Letters, made me paſs over all Obſtacles, Reflections, and Diſcouragements, when to ſerve you and your Honourable Society was my only Deſign. I have rather choſen to addreſs you in a plain and common Stile, than give the leaſt ſuſpicion of Diſingenuity in a finer Language; eſpecially ſince it is Hiſtory I have written, where Matter of Fact, and not Romance, where Eloquence, is the chief Deſign.

The Copper Plates, which at my own Charges I have cauſed to be engraven here, I acknowledge might have been done finer in *London*; but ſince I had the Original by me, whereby I was able from time to time to correct in the Ingraving what Errors happen'd in drawing the Figures, I rather choſe to have them done by me here: And tho' the Draughts of the Engraver be courſe, yet I have endeavoured what in me lay to have the Figures true and well proportion'd. Wiſhing all Health and Happineſs to your ſelf, Proſperity and Succeſs to your Honourable and Famous Society. I continue,

Sir,

Your moſt humble, and

moſt obliged Servant,

From my Houſe at
Dundee, April 27.
1709.

PATRICK BLAIR.

The

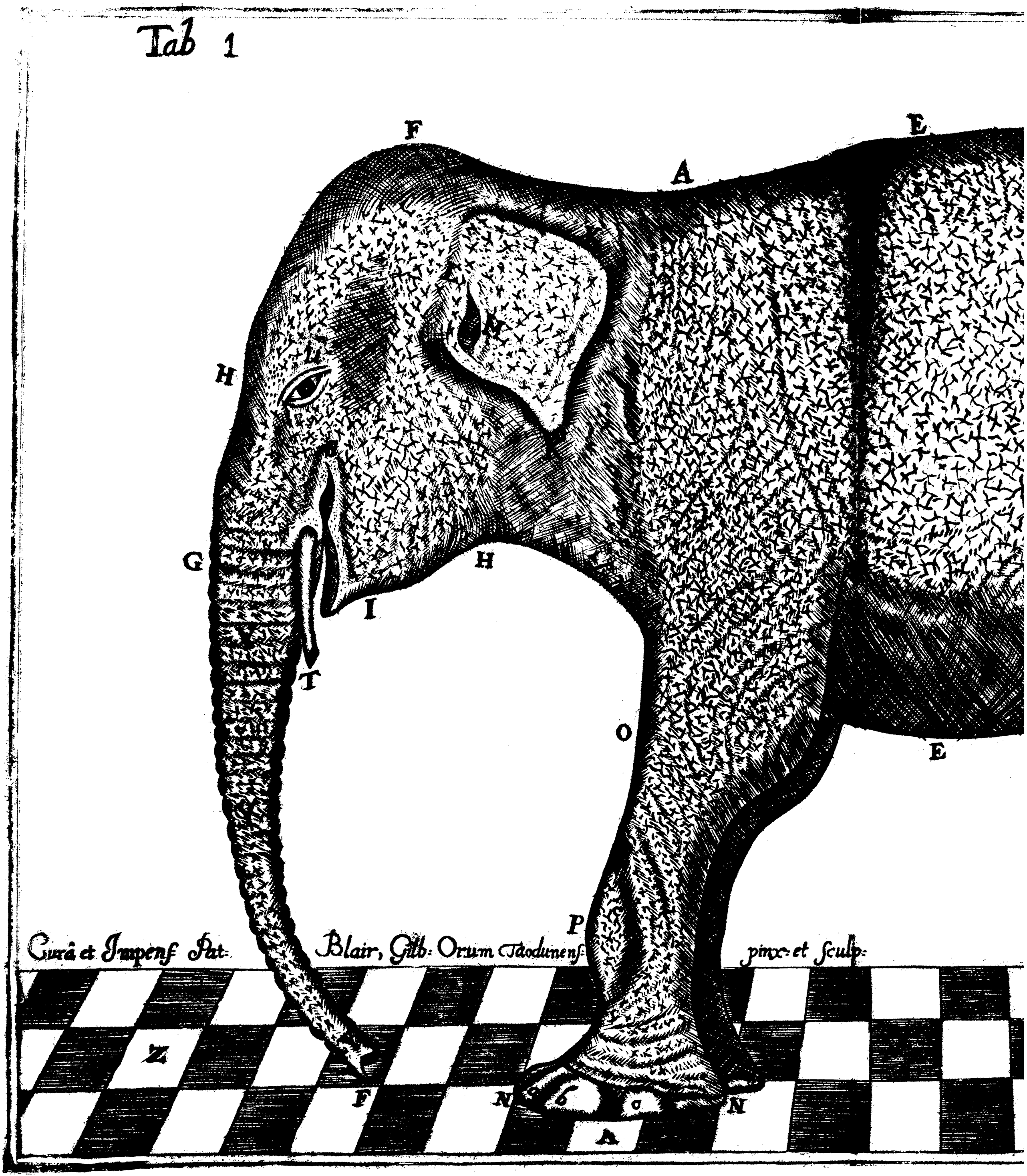
The Explication of the Tables.

TABULA I.

Repreſents the ſtuff'd Skin of the Elephant, as it now ſtands in our Hall, with an Account of its particular Dimenſions.

	Feet.	Inches.
A. A. The Height of the *Elephant* at the Fore Feet.	8	6
B. B. Its Height at the Hind Feet.	9	
C. C. Its Length.	10	
C. D. The Length of the Tail.	4	3
E E. The Circumference of the Belly.	14	
F. F. From the top of the Head to the Point of the *Proboſcis*.	8	
G. F. The length of the *Proboſcis*.	4	6
H. H. The diſtance between the Forehead and lower Jaw.	2	3
F. I. From the top of the Head to the lower Jaw.	4	6
K. K. The length of the Ear.	1	7
L. L. Its breadth.	1	5
M. The Orifice of the *Meatus Auditorius*.		
N. N. The Circumference of the fore Foot round the Hoofs.	3	10½
a. The Fore Hoof fore-ſhortned.		5
b. The middle External Hoof.		5
c. The third External Hoof.		4½
Note, That neither the Diameter of the fore Foot from before to behind, which was——	1	4½
nor from the right to the left, which was——	1	2
can be ſo here.		
O. O. The Circumference of the fore Foot at the upper Joint.	4	3
P. P. At the Articulation with the *Carpus*.	2	6½
Q. Q. The Circumference of the hind Foot round the Hoofs.	3	4
The Diameter from before to behind.		
From the right to the left.		
a. The breadth of the fore Hoof.		3
b. The breadth of the outer Hoof.		4
c. The breadth of the third Hoof.		4
R. R. The Circumference of the hind Leg.	2	2

Tab 1



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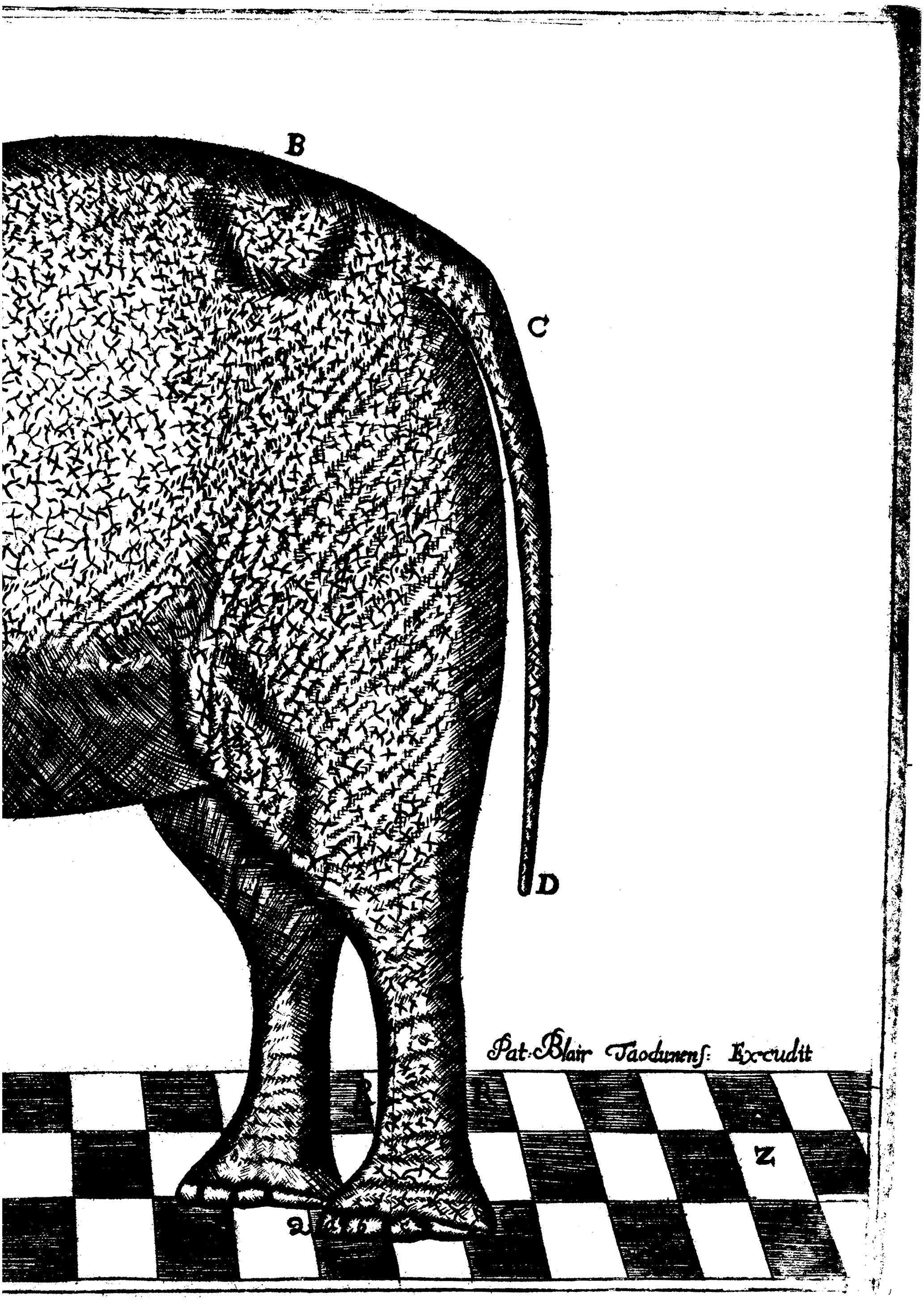
B
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D
Pat: Blair Taodunens: Excudit
R
R
Z
Q

S. The Mouth.
T. The Tusks broken off by the middle.
U. The Eye.
X. Repreſents the Scabs about the Belly.
Y. Y. The Depreſſions in the Skin through the folding of the *Proboſcis*.
a. A Protuberance firſt occaſion'd by the *Oſſa Innominata*, when the Animal was alive and very lean, and ſtill remaining in the Skin.
b. A Protuberance in the fore-part of the Thigh.
c. The lower Joint of the fore Foot, where there is a Depreſſion in the Skin.
d. *d*. Several Wrinkles in the ſtuff'd Skin.

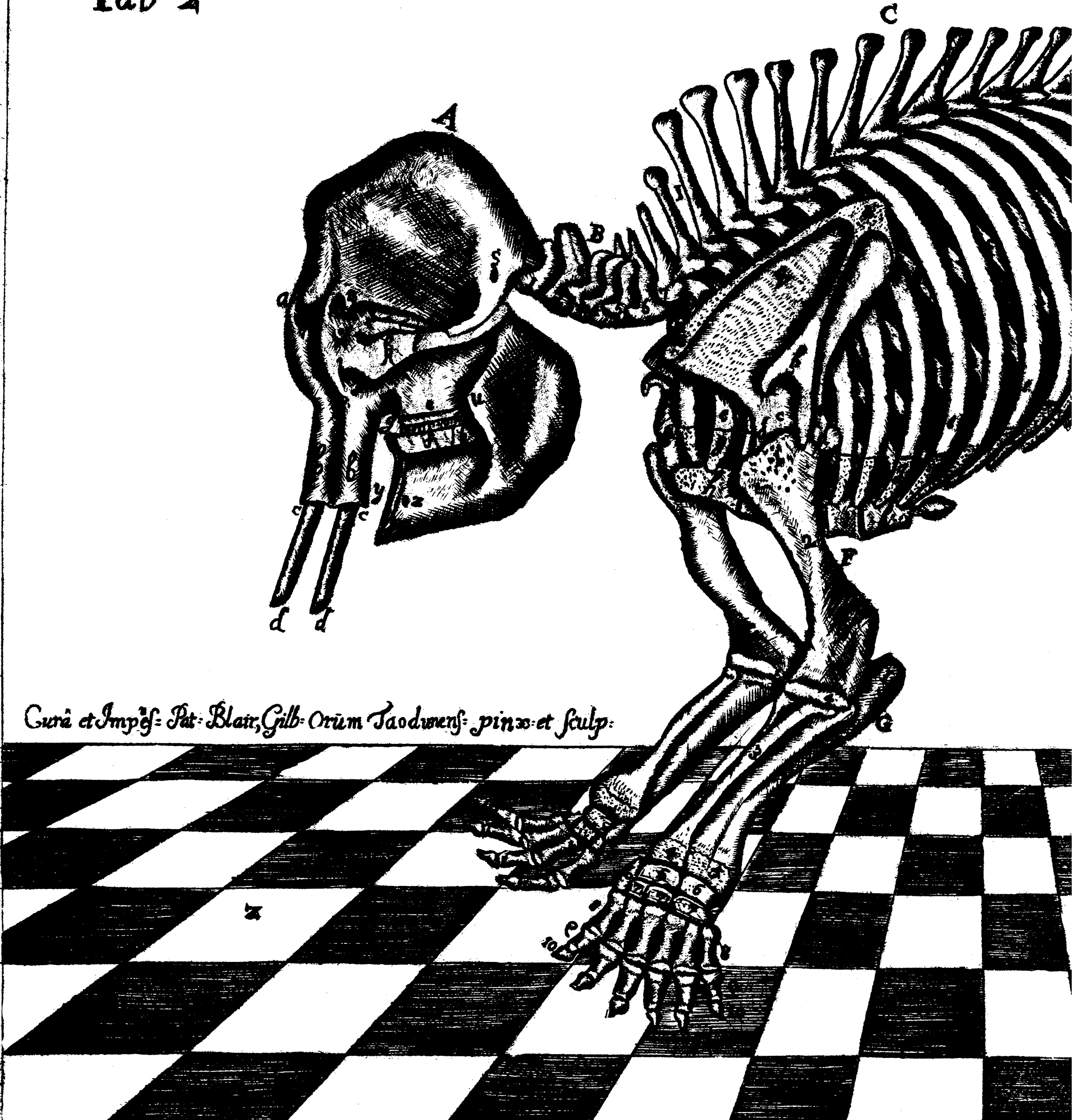
TABULA II.

Repreſents the Sceleton of the Elephant, as it was mounted by my Direction, and now ſtands in the Repoſitory of Rarities in Dundee.

A. The Scull taken in Prophile, whereby a part of the fore ſide is foreſhortned.
a. The Hole for the Root of the Trunk foreſhortned.
b. *b*. The two *Oſſa Palati*.
c. *c*. The Two Tusks as they proceed from the *Oſſa Palati*.
d.*d*. The broken off Extremities of the Tusks.
e. The Grinders of the Upper Jaw.
f. The fore Grinder of the Lower Jaw.
g. The undulating Lines of the lower Surface of the Grinders of the Upper Jaw.
h. The inner Grinder of the Lower Jaw.
i. Part of the *Os Malæ*.
k. Its Articulation with the *Os Zygomaticum*.
l. The *Os Zygomaticum*.
m. The Orbit of the Eye.
n. Its upper Protuberance.
o. Its middle Protuberance where the *Trochlea* is inſerted.
p. Its lower Protuberance.
q. A *Sinus* at the bottom of the Orbit.
r. *r*. A Depreſſion fit for lodging the Muſcles of the lower Jaw and *Proboſcis*.
s. The Orifice of the *Meatus Auditorius*.
t. *t*. The Articulation of the *Os Calvariæ* with the *Os Zygomaticum*.
u. The *Proceſſus Conona* of the lower Jaw.

x. The Inſertion of the *Muſculus Maſſeter*
y. The ſpace for the Mouth betwixt the *Os Palati* and lower Jaw.
z. An Orifice from which the *Nervus Maxillaris inferior* proceeds.
B. The *Vertebræ* of the Neck.
1. The firſt *Vertebra*.
2. The ſecond *Vertebra*, or Tooth which riſes higher than the reſt.
3. The third *Vertebra* having ſcarce any Spinal Proceſs.
4. The 4th, whoſe Spinal Proceſs is not yet ſeen.
5. The 5th, with the Spinal Proceſs beginning to appear.
6. The 6th, whoſe Spinal Proceſs aſcends higher, and is remarkable at its fore-part, as in *Tab.* 4.
7. The 7th, whoſe Spinal Proceſs ſtill aſcends, and with whoſe back-part the firſt Rib is articulated.
C. The *Vertebræ* of the Back.
1.——13. Their *Proceſſus Spinoſi*, which have no Protuberance at their Extremity, whereof 1————C. are the longeſt, and C.———13. become gradually ſhorter.
D The Spinal Proceſſes of all the reſt of the *Vertebræ* to the *Os Sacrum* which are ſhorned by degrees.
xxxxx &c. the oblique Proceſſes of the *Vertebræ*.
E. The *Scapula*.
a. a. The ſpongious Margin of the *Scapula*.
b. b. Its *Proceſſus Spinoſus* ſending forward a Protuberance.
c. c. Its Neck.
d. d. The *Epiphyſis* which receives the *Humerus*.
e. e. *&c.* The Ribs.
f. f. *&c.* The Ribs which appear on the oppoſite ſide.
g. g. The Cartilages of the *Sternum*.
h. h The Bones of the *Sternum*.
i. i. i. The three Ribs which have no Cartilages
l. l. l. The Bodies of the three *Vertebræ Lumborum*.
F. The *Humerus*.
1. Its upper part, ſpongious and rugous, for the Inſertion of Tendons.
2. Its middle part more ſolid.
3. A large oblique *Sinus* for lodging the *Biceps*.
4. Its lower Extremity articulated with the *Cubitus* and *Radius*.
G. The *Cubitus* and *Radius*.
1. The *Olecranon*.
2. An hallowneſs on the outſide of the *Cubitus*.
3. The *Radius*.
4. Its lower *Epiphyſis*, rugous, and ſeparated from it by a Suture,
5. The lower *Epiphyſis* of the *Cubitus*, ſeparated likewiſe by a Suture.
6 6 6. Three Bones of the firſt Rank of the *Carpus*.

Tab 2



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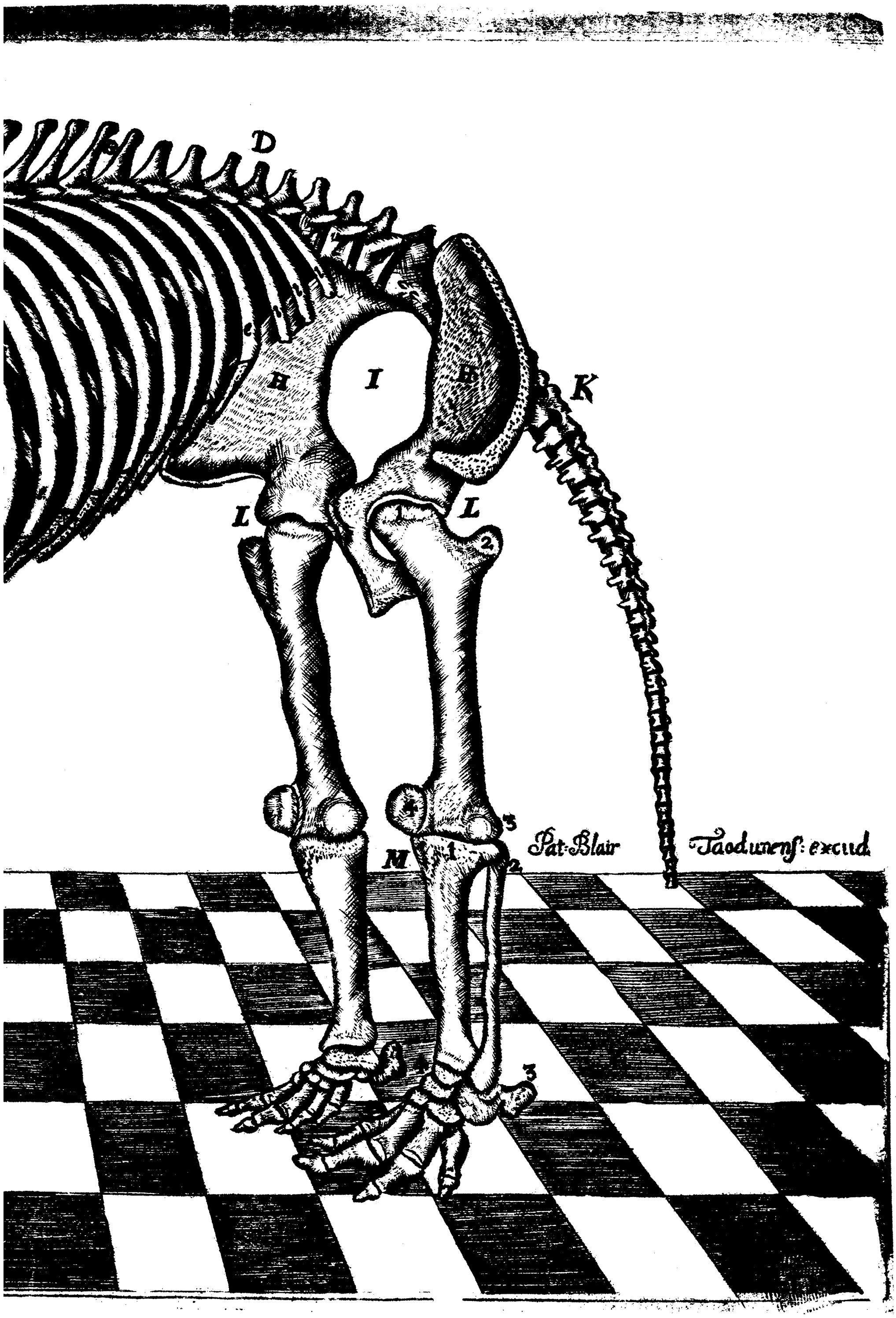

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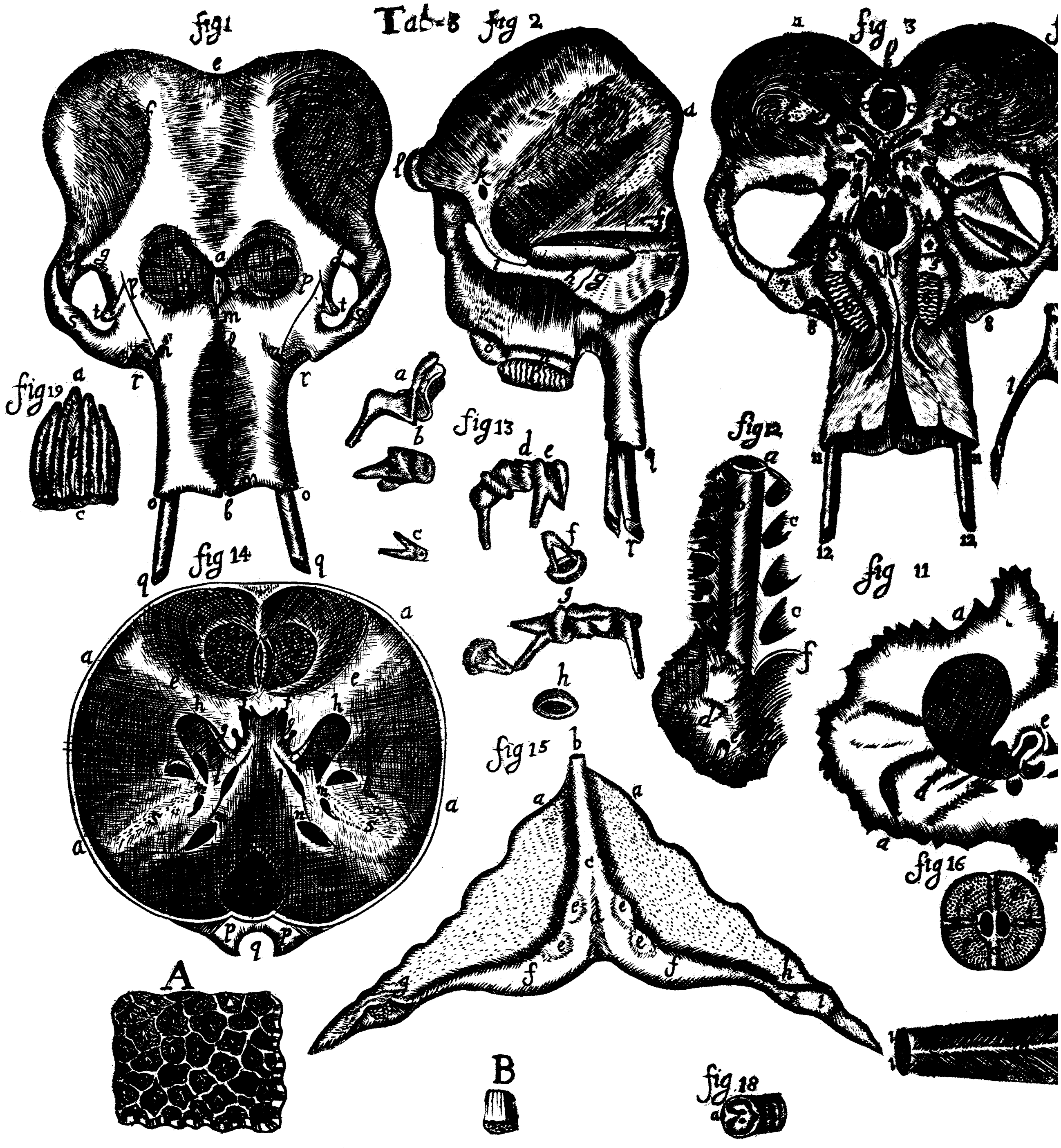
Tab. 8



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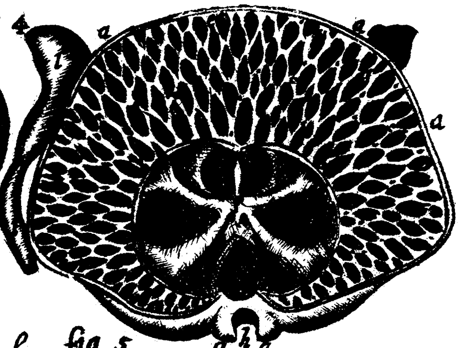
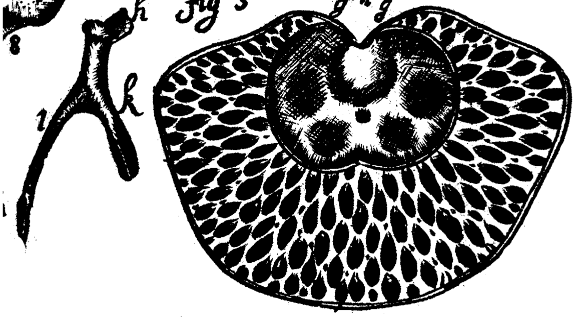
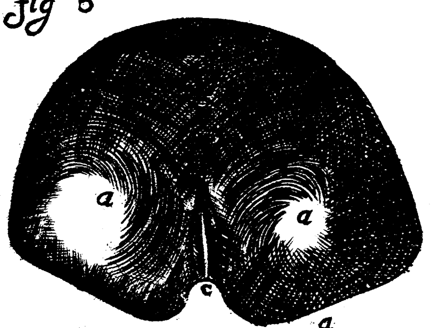
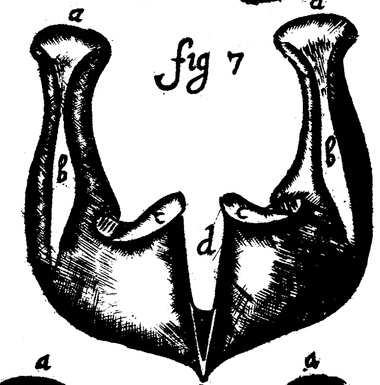
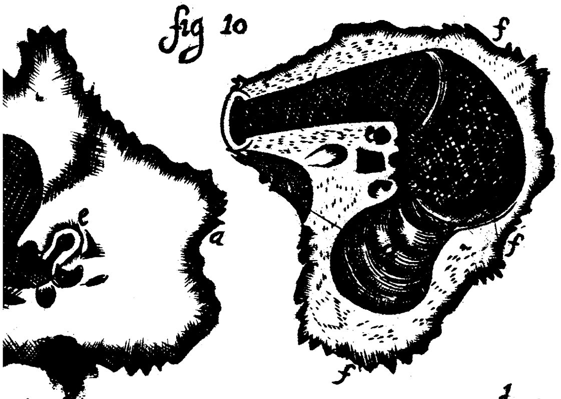
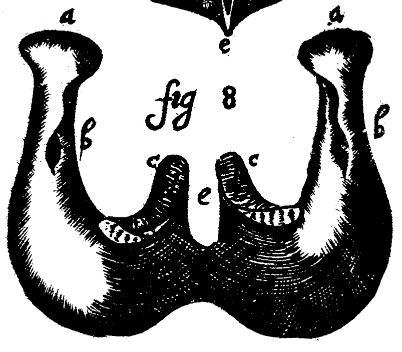


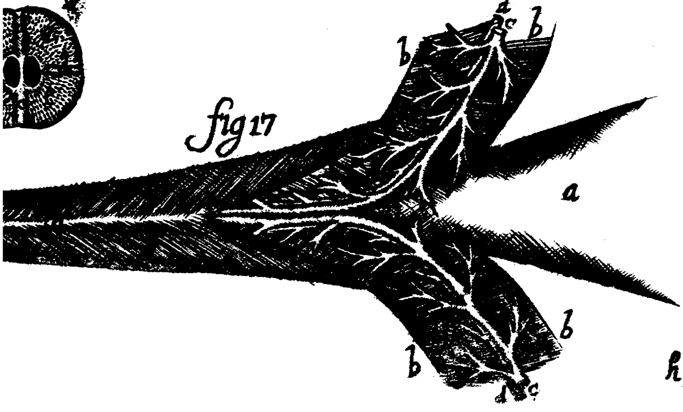


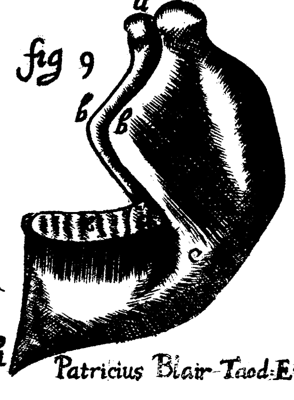












Patricius Blair-Taod: Exc:

7.7.7. Three Bones of the ſecond Rank.
8——8. The Bones of the *Metacarpus.*
9——9. The firſt Bones of the Toes.
10——10. The ſecond Bones of the Toes.
H.H. The *Oſſa Innominata* repreſented in *Profile.*
I. The *Pelvis.*
K. The Tail.
L.L. The two Thigh Bones.
1. The *Epiphyſis* receiv'd by the *Oſſa Innominata*, and articulated with the *Femur* by a Suture.
2. The *Trochanter major.*
3. The lower *Epiphyſis.*
4. The *Patella.*
M. The *Tibia.*
1. *Perone.*
2. The *Talus.*
3. The Bones of the *Tarſus.*
4. The Bones of the *Metatarſus.*
5. The Bones of the Toes.

TABULA III.

Repreſents the Head in different Views, Parts of the Ear, Proboſcis, *and* Uterus.

Figure 1. Repreſents the fore-part of the Head.
a. The Hole for the Root of the Trunk.
b. The lower part of the *Os Palati*, over which hangs the *Proboſcis.*
c.c. A Depreſſion of the Bone on each ſide, for lodging of the Muſcles of the lower Jaw.
d.d. The two Eminences on each ſide at the top of the Head.
e. A Depreſſion in the middle betwixt theſe two Eminences.
f.f. Two Beginnings of the Angles for forming the Depreſſions for the Muſcles of the lower Jaw, betwixt which the Surface of the Bone begins to be plain.
g. The upper Production of the *Sinus* where the Eye is lodg'd.
h. The Beginnings of the *Laminæ* which run betwixt the two Tables of the Scull, and here appear in the bottom of the Hole for the Root of the *Proboſcis.*
i. The *Os Vomeris* to which the *Cartilaginous Septum* of the *Proboſcis* was adherent.
k. The beginning of the Depreſſion of the *Os Palati.*
l. The middle of the *Sinus* for the Orbit of the Eye.
m. The Articulation of the two *Oſſa Palati.*
n.n. The Articulation of the *Os Maxillæ* with the *Os Palati*; where alſo is a *Crena* for containing the Blood Veſſels, as they

they go to the nouriſhment of the *Proboſcis*.

o. o. The Place where the Tusks proceed from the *Os Palati*.
p. p. The upper part of the Articulation of the *Os Maxillæ* with the *Os Palati*.
q. q. The broken Extremities of the Tusks.
r. r. A great Oval Hole in the *Os Maxillæ*, through which a conſiderable Branch of the 5th Pair of Nerves, and a large Artery from the *Arteria duræ Matris* paſs to and are diſpers'd in the *Proboſcis*, and by which a big Vein returns and joins to the *Vena jugularis*.
s. The *Os Zygomaticum*.
t. The middle Production for the Orbit of the Eye.

Figure 2. repreſents the Side of the Head.

a. The beginning of the Depreſſion for the Muſcles of the lower Jaw and *Proboſcis*.
b. The Inſertion of the *Retractores Proboſcidis*.
c. The Inſertion of the *Muſculus Temporalis*.
d. The bottom of the Orbit of the Eye.
e. Its upper Production.
f. Its lower Production.
g. The Articulation of the *Os Maxillæ* with the *Os Zygomaticum*.
h. The *Os Zygomaticum*.
i. The Articulation of the *Os Zygomaticum* with the *Os Calvariæ*.
k. The Orifice of the *Meatus Auditorius*
l. One of the *Condyles* of the *Occiput*, which is articulated with the firſt *Vertebra*.
m The Orifice of the large Oval Hole in the *Os Maxillæ*.
n. The fore Grinder in the upper Jaw.
o. The hind Grinder, or rather Wedge for keeping the fore Grinder faſt.
p. The undulate Lines in the lower Surface of the Teeth.
q. The beginning of the Tusks as they proceed from the *Os Palati*.
r. Their broken off Extremities.
s. The *Sinus* in the bottom of the Orbit of the Eye for the *Nervus Opticus*.

Fig 3. repreſents the back-part of the Head.

a. a. The two Eminences at the upper part of the Head enlarg'd, whereby the *Sinus* betwixt them becomes narrower and deeper.
b. The *Sinus* betwixt theſe Eminences ſhortned.
c. c. The two *Condyles* which are receiv'd by the firſt *Vertebræ*.
d. The Hole for the Spinal Marrow.
e. e. Two Protuberances above the *Meatus Auditorius*.

f. The Orifice of the *Meatus Auditorius.*

g. A *Sinus* whence the *Proceſſus Styloides* ariſes, which is ſhewn by itſelf.

h. The Cartilage whereby the *Proceſſus Styloides* is articulated with the Scull.

i. Its longeſt and ſmalleſt part.

k. Its ſhorteſt and biggeſt part.

l. The Orifice for the *hard Portion.*

m. m. The Hole for the Jugular Vein and *Par vagum.*

n. n. The bony part of the *Aqueduct*

o. o. The Extremity of the *Aqueduct* where the fleſhy part begins.

p. p. The Hole for the Carotid Artery.

q. q. The Hole for the *Arteria duræ Matris*, and 3d Branch of the 5th Pair.

r. The middle of the Baſe of the Scull beneath the Hole for the Spinal Marrow, where the Bone is ſomewhat raiſed.

s. A Depreſſion on the Baſe of the Scull before the *Choana* begins.

t. The *Choana*, or Paſſage between the Root of the Trunk and the Mouth.

u. A Production of the *Vomer*, or *Septum*, which divides the *Choana* in two.

x. The Articulation of the *Os Zygomaticum* with the *Os Occipitale.*

y. The *Glenoid* Cavity for Reception of the lower *Condylus* of the lower Jaw.

z. The *Sinus* for the Globe of the Eye.

1. The *Os Zygomaticum.*

2. The fore Grinder on the right ſide.

3. The hind Grinder on the right ſide.

4. The hind Teeth on the left ſide, which not grinding at all, only ſerve as a Wedge.

5. The fore Teeth on the left ſide, the back-part of which does not Grind.

6. *6.* The lower Surface of the Grinders, where their undulate Lines appear.

7. 7. Part of the *Os Maxillæ*, where it is articulated with the *Os Zygomaticum.*

8.8. The great Oval Hole in the *Os Maxillæ.*

9. 9. The back-part of the *Os Palati.*

10. The Interſtice between the the *Oſſa Palati* on the back-ſide.

11. 11. The Tusks as they proceed from the *Os Palati.*

12. 12. The two broken off Extremities of the Tusks.

Fig. 4. repreſents the Scull ſaw'd tranſverſely, ſo that its lower part with the Baſe appear.

a. a. The outward Table of the Scull.

b. b. The inner Table.

c. c. The *Laminæ* which paſs betwixt the two Tables.
d. d. the *Cells* form'd by theſe *Laminæ*.
e. e. The Orifices for Veſſels which penetrate the *Laminæ*.
f. The Seat of the Brain, repreſented at more length in *Fig*. 3.
g. g. The two *Condyles* which are receiv'd by the firſt *Vertebra*.
h. The Hole for the Spinal Marrow.
i. The *Os Zygomaticum*.

Fig. 5. repreſents the upper part of the Scull ſaw'd tranſverſely, with the *Cells* running betwixt the two Tables and *Laminæ* which cover the Seat of the Brain.

Fig. 6. repreſents the outſide of the upper part of the Scull ſaw'd tranſverſely.
a. a. Two Eminences on the top of the Scull.
b. A *Sinus* betwixt theſe two Eminences.
c. A long *Spina* in the bottom of the *Sinus*.

Fig. 7. repreſents the fore-part of the lower Jaw.
a. a. The two *Condyles*.
b. b. The two *Proceſſus Coronæ* ſhortned by the oppoſite view.
c. c. The fore Grinders of the lower Jaw.
d. The diſtance between the two Jaws for lodging the Tongue.
e. The *Symphyſis Menti*.

Fig. 8. repreſents the back parts of the lower Jaw.
a. a. Two *Condyles*.
b. b. Two large Orifices of a Cavity, wherein enter the Veſſels for nouriſhing the Teeth, and wherein are lodg'd the *Rudimenta dentium*, as in Fig 19.
c. c. The two fore Grinders of the lower Jaw.
d. d. The undulate Lines in their upper Surface.
e. The diſtance between them for lodging the Tongue.
f. The Concave part of the lower Jaw.

Fig. 9. repreſents one ſide of the lower Jaw.
a. a. The two *Condyles*.
b. b. The two *Proceſſus Coronæ*.
c. A Protuberant part of the lower Jaw where the *Rudimenta dentium* are lodg'd.
d. The inner Grinder of the lower Jaw.
e. The outward Grinder, where are repreſented the Ridges and Interſtices of the ſides of the Teeth.
h. The *Symphyſis Menti*.

Fig. 10. repreſents the lower part of the *Proceſſus Petroſus*, wherein are ſhewn
a. a. A part of the *Meatus Auditorius* opened.

b. The *Crena* for the *Membrana Tympani*.

c. The *Cavitas Tympani*, endued with ſeveral *Cells*, and Interſtices betwixt them.

d. A Continuation of the ſame Cavity.

e. The Orifice of the hard Portion of the *Nervus Auditorius*.

f. The ragged Margin of the Bone.

Fig. 11. repreſents the inner Surface of the upper part of the *Proceſſus Petroſus*.

a. *a*. The ragged Margin of the Bone.

b. *b*. The upper part of the *Cavitas Tympani*.

c. The *Foramen Ovale*.

d. A Protuberance, within which is the Cavity of the *Cochlea*.

e. The Orifice for the hard Portion of the *Nervus Auditorius*.

Fig. 12. repreſents the *Meatus Auditorius* with the *Proceſſus Petroſus*.

a. The External Orifice of the *Proceſſus Petroſus*.

b. *b*. The *Meatus Auditorius* deriv'd from the *Lamina* above, and running from the outer Table to the *Proceſſus Petroſus*.

c. *c*. The *Lamina* and *Cellules*, as they proceed from the *Proceſſus Petroſus* on each ſide.

d. The *Proceſſus Petroſus*.

e. *Orificium Foraminis Nervi Auditorij*.

f. Part of the inner Table of the Scull.

Fig. 13. repreſents the Bones of the Ear in their proper Dimenſions and different Views.

a. The *Malleolus*.

b. The *Incus*.

c. The *Stapes* without the Baſe.

d. *e*. The back-part of the *Malleolus* and *Incus* articulated together.

f. The *Stapes* with its Baſe.

g. The *Malleolus*, *Stapes*, and *Incus* articulated together; whereby is ſhewn the true diſtance betwixt the *Membrana Baſis Tympani*, and the *Foramen Ovale*, which the Baſe of the *Stapes* ſhuts.

h. The Baſe of the *Stapes*.

Fig. 14. repreſents the Seat of the Brain enlarg'd, that the Orifices for the Blood Veſſels and Nerves may be the more obvious.

a. *a*. The inner Table depriv'd of the ſurrounding *Cellules*.

b. *b*. The anterior *Sinus*.

c. *c*. The *Os Ethmoides*, with its Eminences, *Sulci*, and *Foramina* for the *Nervus Olfactorius*.

d. The *Criſta Galli*.

e. *e*. The anterior Eminences.

f. *f*. The Orifice for the *Nervus Opticus*.

g. *g*. The Hole called the *Foramen Lacerum*, through which paſs the *Nervi Motorij Pathetici Ophthalmici*, or firſt Branch of the 5th and the 6th Pair.

h. *h*. The 2d Branch of the th Pair.

i.i. The third Branch of the 5th Pair.

k.k. The Hole for the *Arteria dura Matris.*

l.l. The Hole for the Carotid Artery.

m.m. The Hole of the *Nervus Auditorius.*

n.n. The Hole for the Jugular Vein.

o. The Hole for the Spinal Marrow.

p p. Part of the two *Condyles.*

q. The External Hole for the Spinal Marrow.

r.r. The two middle *Foſſæ.*

s.s. The *Proceſſus Petroſus.*

t.t. The *poſterior Foſſa*, or Seat of the *Cerebellum.*

u. The Seat of the *Glandula Pituitaria.*

Fig. 15. repreſents the *Vterus.*

a.a. Part of the *Ligamenta lata Vteri.*

b. Part of the *Vagina* cut off.

c. The beginning of tbe Body of the *Vterus,*

d. Divided into two Portions, with an Interſtice in the middle.

e.e. Several Eminences repreſenting the External part of ſo many *Cellules.*

f.f. The *Cornua Vteri.*

g. A looſe Membrane wrapt up, that the *Ovaria* below may appear.

h. The *Ovarium* depriv'd of the thick looſe Membrane which fluctuates above it.

i. The *Ovarium* covered with the Membrane.

Fig. 16. repreſents the *Proboſcis* cut tranſverſly.

a.a. The two Cavities of the *Proboſcis.*

b. The *Septum* which divides the Cavities.

c.c. The tendinous Interſection which runs from before to behind.

d.d. The tendinous Interſection which runs from the Right to the Left.

e.e. e.e. The Inſertion of the 4 Muſcles into the tendinous Interſection, whereby the Fibres of the one aſcend, and the other deſcend obliquely.

Fig. 17. repreſents the diſſected *Proboſcis.*

a. The External part of the Cartilage which ſurrounds the Cavity of the *Probiſcis*, as it ariſes from the Hole in the fore-part of the Scull.

b.b. That Pair of Muſcles call'd the *Levatores Proboſcidis*, rais'd from above the foreſaid Cartilages, with their inner Surface turn'd up, that the Divarications from the Blood Veſſels in them may appear.

c c. The Orifices of the Veins diſpers'd in theſe Muſcles.

d.d. The Orifices of the Arteries.

e.e. Their ſeveral Branchings.

f. The deſcent ſtreight along above the Cavity of the *Proboſcis.*

g.g. The oblique deſcent of the Fibres of the *Erectores* of the *Proboſcis.*

h. The tendinous Interſection running down the middle of the *Proboſcis.*

i. i. The Orifices of the Cavities of the *Proboſcis.*

Fig. 18. repreſents the Extremity of the *Proboſcis* cut off.

a. A Protuberance ariſing from the fore-part of the Extremity of the *Proboſcis*, and is extended into a Cavity in the back part *b.* whereby the Animal catches hold of any thing.

Fig. 19. repreſents one of the Rudiments of the Teeth, which was taken out of the great Hole in the inner ſide of the lower Jaw, as repreſented (*b. Fig.* 8.) but much enlarg'd in the proportion.

a. Its upper part, which is hard, ſolid, and white.

b. Its middle part diſtinguiſhed by ſeveral Furrows and Ridges.

c. Its lower part, which is hollow, and whereinto both the Blood Veſſels that ſerve for its Nouriſhment, and a Branch of the Nerve call'd *Maxillaris Inferior*, proceeding from the 5th Pair, enters.

A. Repreſents a Portion of the *Cuticula*, wherein is ſhewn its inner Surface, and uſual thickneſs; at its Margin at the left hand and lower part are ſeveral white lines, which I take to be the Lineaments of ſo many Blood Veſſels; the Pyramids, from whence the Hairs proceed, with the ſeveral *Favi* or Depreſſions.

B. Repreſents one of the Scabs adhering to the *Cuticula*, where they are thickeſt.

TABULA IV.

Repreſents the Vertebræ *of the Neck both ſeparate and conjoin'd,* Oſſa Innominata, Scapula, *the back-part of the fore and hind Feet, ſeparate Bones of the* Carpus *and* Tarſus, *concave part of the Liver, and* Os Hyoides.

Figure 1. Repreſents the fore and back-part of all the ſeven *Vertebræ* of the Neck.

A. The firſt *Vertebra* of the Neck with its upper part in Profile, to ſhew the Holes for the *Arteria Vertebralis*.

a. a. Two Protuberances, which reach on each ſide to the Scull.

b b. Two Cavities foreſhortned, which receive the *Condyles* of the Scull.

c. c. The two Holes whereby the *Arteria Vertebralis* proceeds from the Scull, and perforates this *Vertebra*.

d. d. Two Holes through which the Artery paſſes out from this *Vertebra*.

e. e. A *Crena* betwixt the two foreſaid Holes, where the Artery is lodg'd.

A. 1. The fore-part of the firſt *Vertebra* ſhewn at large.

a. The Hole for the Spinal Marrow.

b. The Hole for receiving the Tooth of the following *Vertebra*.

c. c. Two Cavities for receiving the *Condyles* of the Scull.

d. d. Two Holes for the Cervical Artery.

e. The upper part of the *Vertebra*.

f. Its lower part.

g. g. The tranſverſe Proceſſes, whoſe Protuberances at the Extremities are repreſented, A. *a. a.*

B. 1. The back-part of the firſt *Vertebra* ſhewn at large.

a. The Hole for the Spinal Marrow.

b. The Hole for the Tooth of the following *Vertebra*.

c. c. The Cavities which receive the body of the following *Vertebra*.

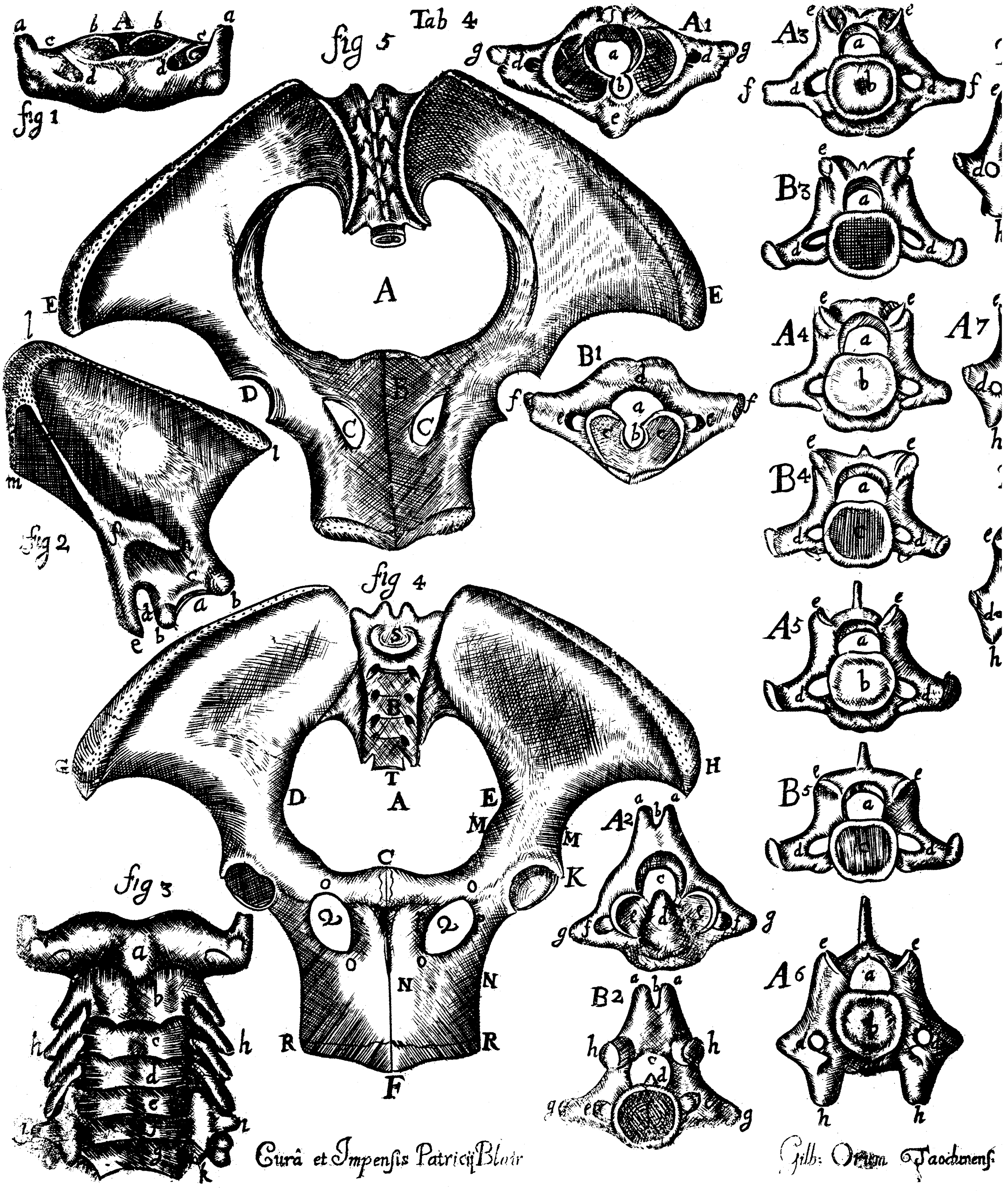
d. The lower part of the *Vertebra*.

e. e. The Holes for the Cervical Artery.

f. f. The two tranſverſe Proceſſes.

A. 2. The fore part of the ſecond *Vertebra*.

a. a. The forked Extremities of the Protuberance, which ariſes inſtead of the *Proceſſus Spinoſus*.



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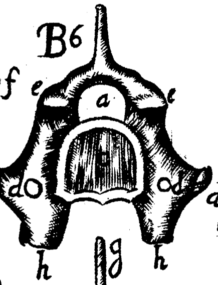

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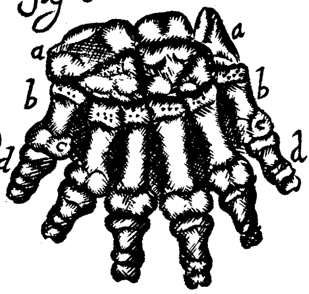

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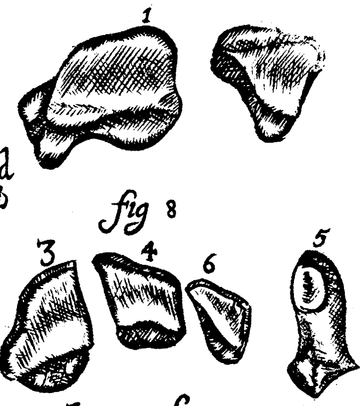

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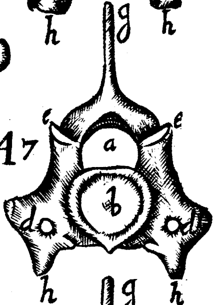

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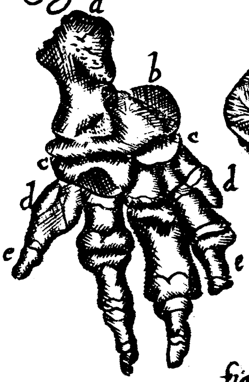

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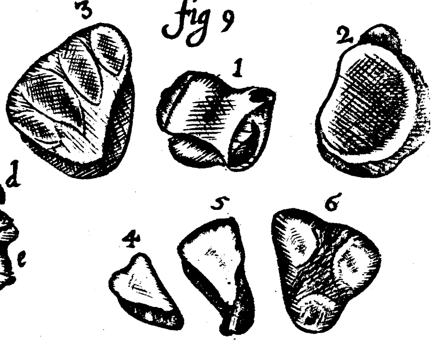

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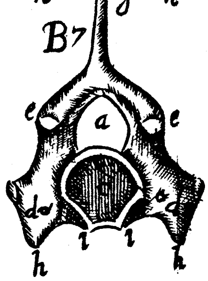

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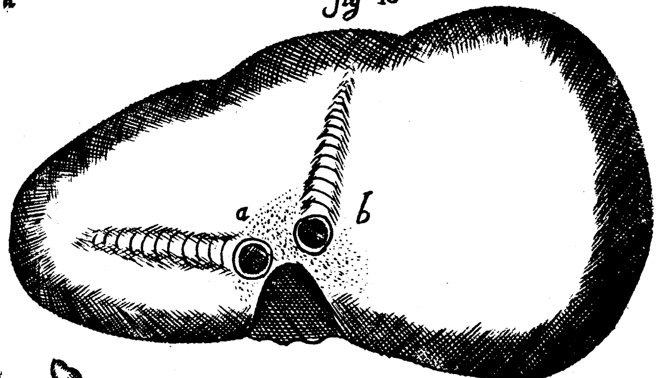

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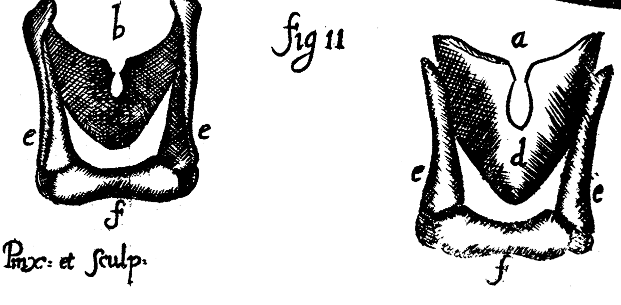

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b. A *Sinus* betwixt them.

c. The Hole for the Spinal Marrow.

d. The Tooth which is receiv'd by the firſt *Vertebra.*

e. e. The two convex Surfaces which are receiv'd into the hind Cavities of the firſt *Vertebra.*

f. f. The two Holes for the Cervical Artery.

g. g. Two tranſverſe Proceſſes.

h. The lower part of the *Vertebra.*

B. 2. The back-part of the ſame *Vertebra.*

a. a. The Protuberances of the *Proceſſus Spinoſus.*

b. The *Sinus* betwixt rhem enlarg'd on the ſide.

c. The Hole for the Spinal Marrow.

d. The Point of the Tooth appearing from the other ſide.

e. e. The Holes for the Cervical Artery.

f. The concave Body of the *Vertebra*, which receives the convex Surface of the following *Vertebra.*

g. g. The *tranſverſe Proceſſes.*

h. h. The two oblique Proceſſes which receive the oblique Proceſſes of the following *Vertebra.*

Note, That the five following *Vertebræ* are repreſented by **A.** B. 3, 4, 5, 6, 7; whereof **A.** repreſents the fore-part, B. the back-part; all the reſt of the ſmall Letters ſhowing as follows.

a. a. &c. The Hole for the Spinal Marrow.

b. b. &c. Their convex Bodies, which are received by the concave Surfaces of the following.

c. c. &c. Their concave Bodies, which receive the convex Surfaces of the former.

d. d. &c. The Holes for the Cervical Artery.

e. e. &c. The oblique Proceſſes.

f. f. &c. The tranſverſe Proceſſes.

g. g. &c. The Spinal Proceſſes, which in the fore-part of 3, 4, ſcarcely appear, but in their back-part appear a little, in 5 ariſe to 1 ½ Inch, and in 6 to 3 Inches.

h. h. In 6, 7, are Protuberances, which run back to guard the Cervical Artery as it paſſes from between the bodies of the *Vertebræ*, and quits the Perforation in their tranſverſe Proceſſes.

i. i. Two *Sinus's* in the back-part of the ſeventh *Vertebra*, which with the like Surfaces in the following make up a Cavity, whereinto the *Condylus* of the firſt Ribs are receiv'd.

Figure 2. Repreſents the *Scapula.*

a. The Head of the *Scapula*, whereby it is articulated with the *Humerus.*

b. b. The two Protuberances on each ſide of its Head.

c. The Neck of the *Scapula.*

d. A *Sinus* between the *Proceſſus Coracoides* and the Neck of the *Scapula.*

e. The *Proceſſus Coracoides* of the *Scapula.*

f. The *Proceſſus Spinoſus.*

g. The Extremity of the *Proceſſus Spinoſus.*

h. A Protuberance running forward from the *Proceſſus Spinoſus.*

i. The forepart of the upper edge of the *Scapula.*

l. A thick ſpongy *Epiphyſis*, which (at the upper edge of the *Scapula*) was ſeparated by boiling.

m. The Angle at the back-part of the *Scapula.*

Figure 3. Repreſents the lower or fore-part of the ſeven *Vertebræ* of the Neck.

a. b. c. &c. The lower or fore-part of the bodies of all the *Vertebræ.*

h. h. The tranſverſe Proceſſes, which run obliquely forward.

i. i. The tranſverſe Proceſſes of the 6th *Vertebra*, running both before and behind to guard the *Arteria Cervicalis.*

k. A *Sinus* in the Body of the ſeventh *Vertebra*, for receiving a part of the firſt Rib.

Figure 4. repreſents the fore-part of the *Oſſa Innominata.*

	Feet.	Inches.
A. The *Pelvis* in Circumference	4	6
B. The *Os Sacrum.*		
C. The upper part of the *Os Pubis.*		
B. C. Between the *Os Sacrum* and the *Os Pubis.*	1	6
D. E. From the Right to the Left of the *Pelvis.*	1	5
C. F. From the upper to the lower part of the *Os Ilium.*	1	
G. H. Betwixt the two outward Extremities of the *Oſſa Innominata.*	3	6
B. H. From the *Os Sacrum* above to the foreſaid Point.	2	9½
From H. to K.	1	
L. The Circumference of the *Acetabulum.*	1	6
E. H. Breadth of the *Os Ilium.*	1	1
M. M. Circumference of the Neck of the *Ilium.*	1	2
N. N. Breadth of the *Os Pubis.*		8
O. O. The length of the *Foramen Ovale* for the *Muſculus Marſupialis.*		5½
P. P. Its Breadth.		4
Q. Q. Its Circumference.	1	1
R. R. The Breadth of the *Oſſa Pubis* before.	1	5
S. T. The length of the *Os Sacrum,* from whence it is join'd with the *Vertebræ Lumborum,* to where 'tis join'd with the Tail.		

Fig. 5. repreſents the back-part of the *Oſſa Innominata.*

A. The *Pelvis.*

B. The back-part of the *Oſſa Pubis* at their Articulation, where there is large Cavity.

C. C. The Oval Hole for the *Muſculus Marſupialis* fore-ſhortned.

D. The Cavity for the *Acetabulum.*

E. E. The Margin of the *Os Ilium,* which ſeparated by boiling.

F. The back-part of the *Oſſa Innominata,* ſhewing their Spinal and oblique Proceſſes.

Fig. 6. repreſents the back part of the Fore Foot.

a. a. The Bones of the *Carpus.*

b. b. The Bones of the *Metacarpus.*

c. c. The *Oſſa Seſamoidea,* whereof there are two upon the lower Extremity of each Bone of the *Metacarpus.*

d. d. The Bones of the Toes.

Fig. 7. repreſents the back-part of the Hind Foot.
a. The *Talus.*
b. Part of the *Aſtragalus.*
c, c. Bones of the *Tarſus.*
d. d. Bones of the *Metatarſus.*
e. e. Bones of the Toes.

Fig. 8. repreſents the Bones of the *Carpus* ſeparately.
1. The upper Surface of the External Bone of the firſt Rank of the *Carpus.*
2. The middle Bone.
3. The third Bone of the firſt Rank.
5. 6. The upper Surface of the three Bones of the ſecond Rank.

Fig. 9. repreſents the Bones of the *Tarſus* ſeparately.
1. The upper Surface of the *Aſtragalus.*
2. The upper Surface of the *Os Naviculare*, much enlarg'd in proportion to the reſt.
3. Its lower Surface.
4. 5. 6. The upper Surface of the *Oſſa Cuneiformia.*

Fig. 10. repreſents the concave ſide of the Liver.
a. The *Vena Porta.*
b. The *Vena Cava.*

Fig. 11. repreſents the *Os Hyoides.*
a. The fore-part.
b. The back-part.
d. d. The *Cartilago Scutiformis.*
e. e. The lateral *Oſſa Hyoidea.*
f. f. The Bones of the Baſe of the *Os Hyoides.*

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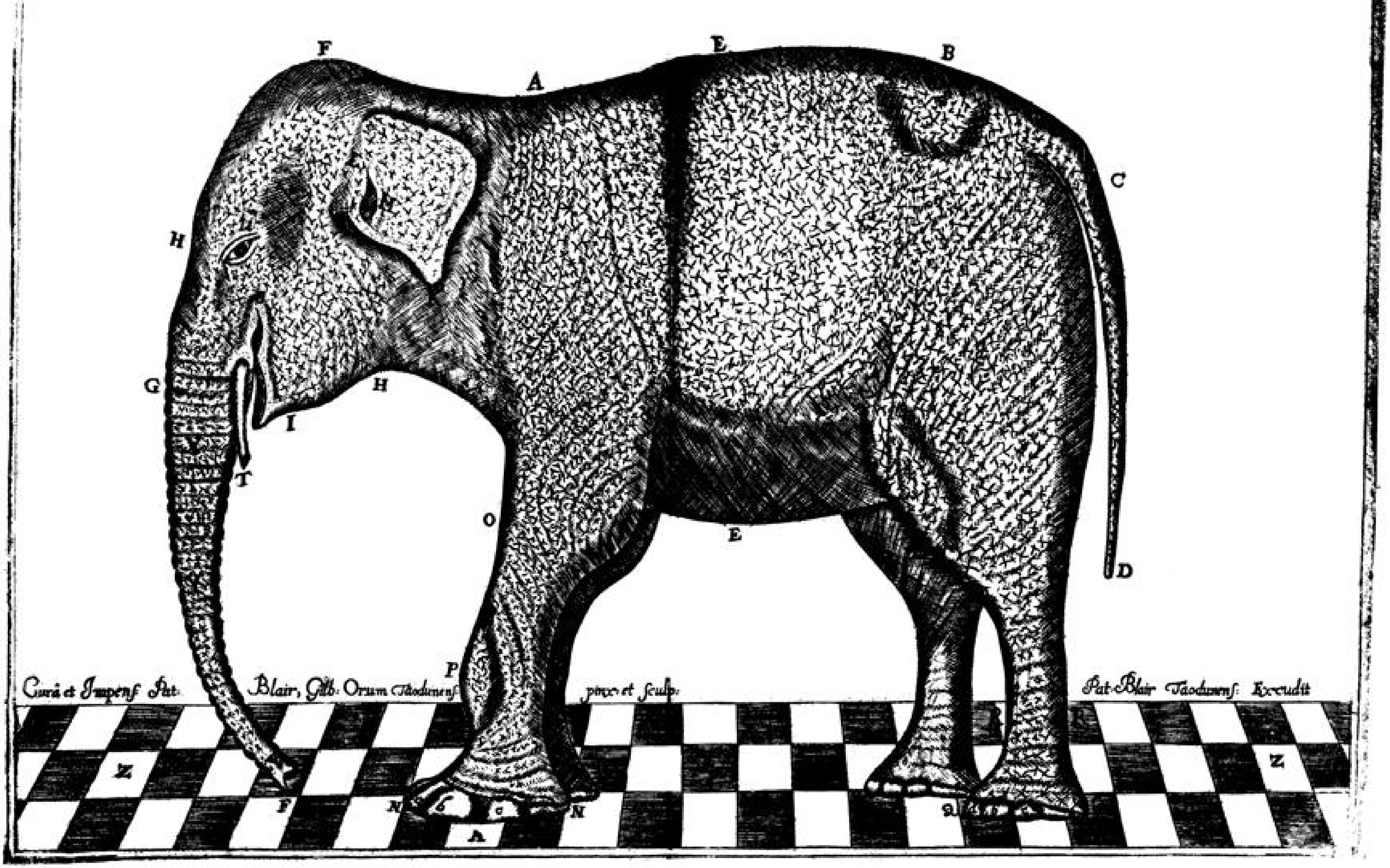

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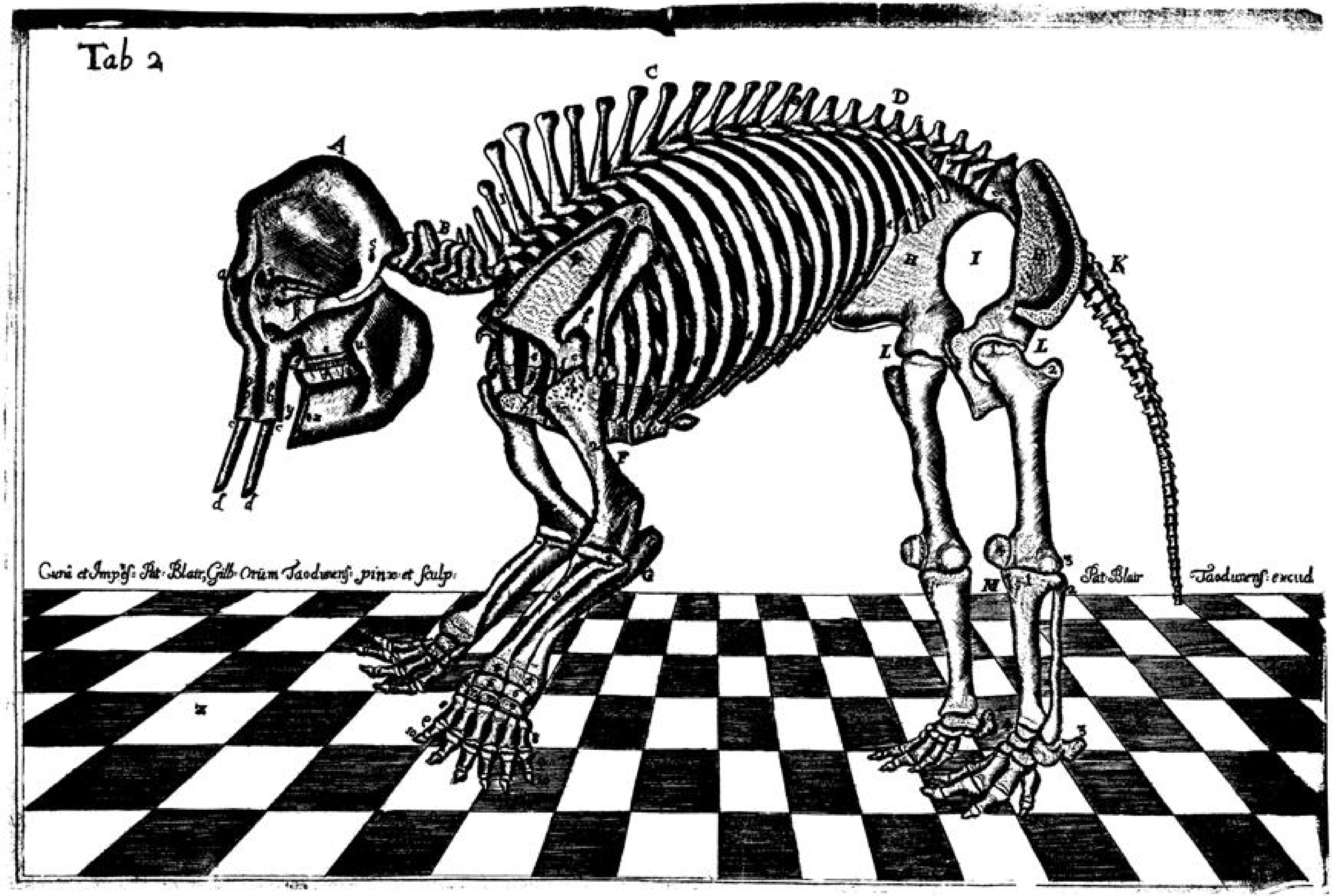

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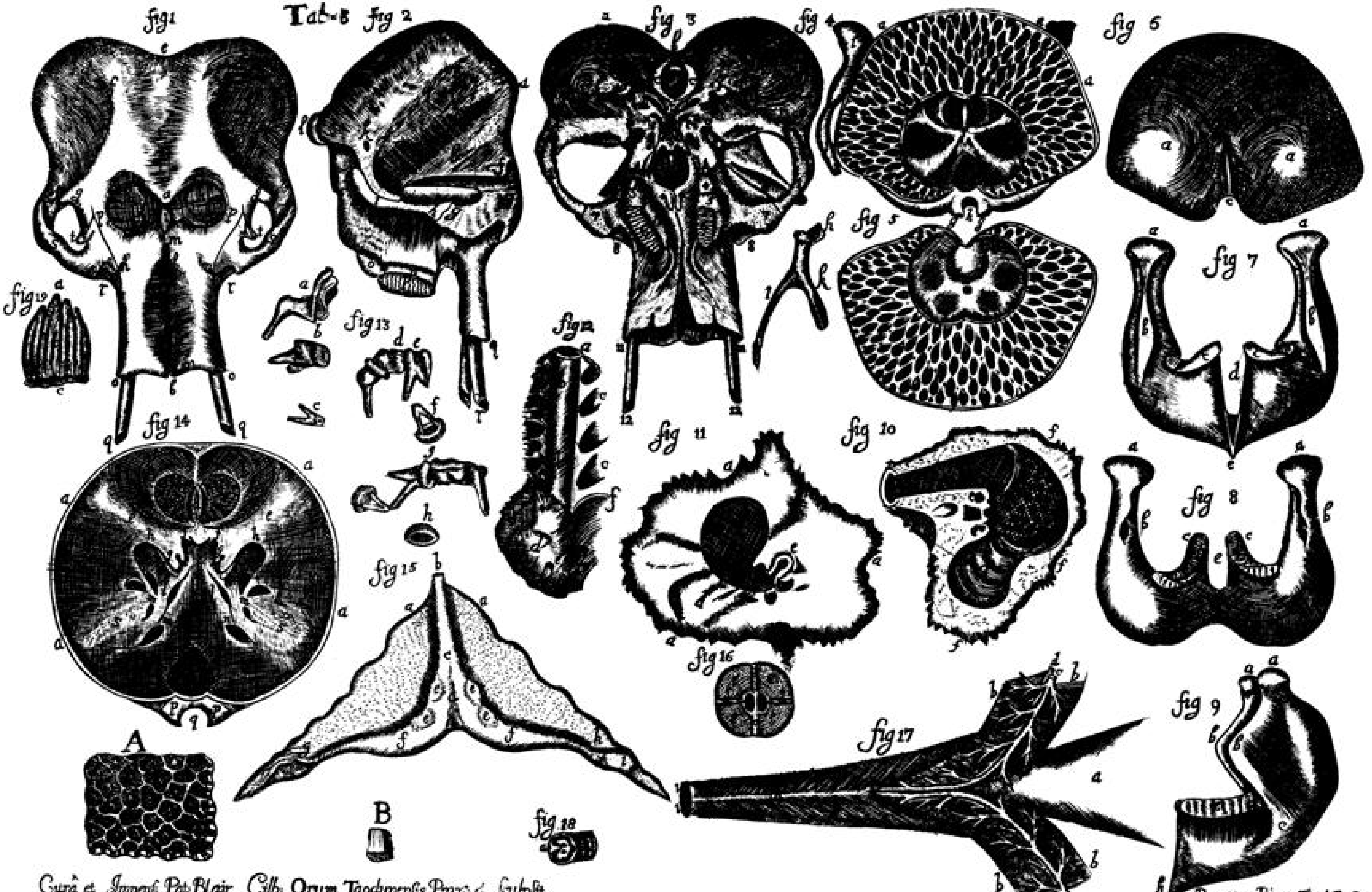

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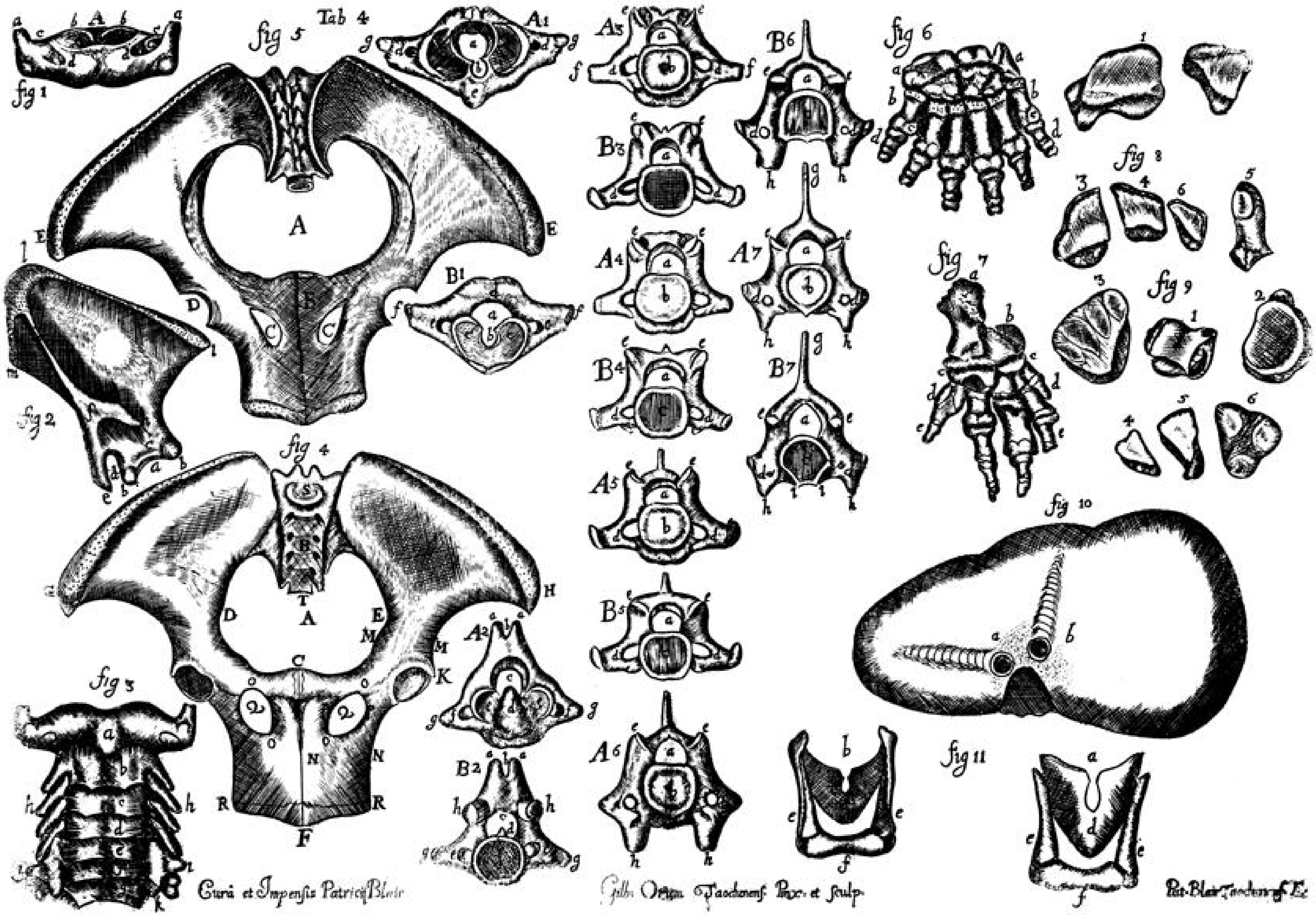

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